model car Science

AUGUST 1963 35¢

Table Top Racing Section

BUILD A **HILL-CLIMB SLOT TRACK**—spills and thrills

* THE **BEST** CHASSIS
* FOR TABLE TOP RACING





Summer Fun! Model Building Projects

HOW YOU CAN MAKE TOP MODELS

WHAT'S **NEW** IN CAR KITS

WILD CUSTOMS AND HOT RODS



CONTEST FOR MODELERS

Working with PUTTY

guide to Custom Building Components



Peace, Man! Ed "The Big Daddy" Roth Speaks:

"MODIFIED RODS ARE STOKE!"



HEY CREW, there's nothing wilder than a modified rod. Especially if it's one of those swinging Revell types.

LIKE I SAID, MAN, THEY'RE STOKE. And if you don't know what that means, let your "Big Daddy" put you on. Everything in this crazy Rod & Custom gig not long ago was tagged as **tough.** Then along came **boss.** Well, like, if tough means good, and boss means even better, then STOKE is like all those 807 Revell CUSTOM CAR PARTS. Glue 'em together and man, like they're stoke, you know, endsville!

NOW PICK UP ON the flippy little Show & Go modified I'm pushing up there. The result of a fast lap around the local hobby store's REVELL CUSTOM CAR PARTS rack. And whether you're looking to build a full-blown, double AA fueler or the wildest street rod, man, you'll flip when you start scroungin' through all those way out packs of CUSTOM CAR PARTS.

UNCLE DANIEL '23 T BUCKETS, sanitary Fiat coupes and those swinging '32 Bantam roadster shells, mean model building combinations that won't quit. Like with the T, man, you get the combo of a genuine rear deck, a modifed rear pickup box with tarp and tailgate. Play the pro role big with Revell's custom car parts. Design and build 'til you're in Fantasy Land. The Fiats and Bantams are cool, too. Lots of extra goodies included for customizing, molding and filling competition body shells. All for you, man, to build your own one-of-a-kind way out winner.

CUSTOM FRAMES that are something else. Chromed tubular roadster chassis, stepped 'n' boxed frame, Mooneyes Dragmaster rails and a chromed frame for late model custom building.

HOT MILLS, man, like Revell's got a few. All grabbers, from blown to f.i. gassers. '63 Vette, Chrysler 413, Buick, Cad, Pontiac, 283 Chevy, and a freakish experimental turbine for those dream cars.

SPEED GOODIES that turn you on. It's like bench racing with every big gun in the rodding sport. Flashing past your orbs are authentic scaled dropped and straight axle assemblies, mag and bike wheels, fuel tanks, street and strip rubber, reversed rims, custom chrome, bubble tops, NHRA decals, show bikes, and a couple of hundred more.

I DON'T MEAN TO LEAVE YOU SPINNING YOUR WHEELS, but it's time to split. The best skinny I can pass along to you is to let us send you a complete catalogue of 36 CUSTOM CAR PARTS KITS and the goodies in them. Clip the coupon and wrap it around a nickel or 5¢ stamp.

NEXT MONTH we'll have some more model jazz for you that you won't want to let slip by. Keep swinging...

Ed Roth is a STOKE!

Ed Roth

Revell CUSTOM CAR PARTS

Send 5¢ in coin or stamp for complete list of 36 Custom Car Part Kits and contents.

REVELL, INC., 4223 Glencoe, Venice, California

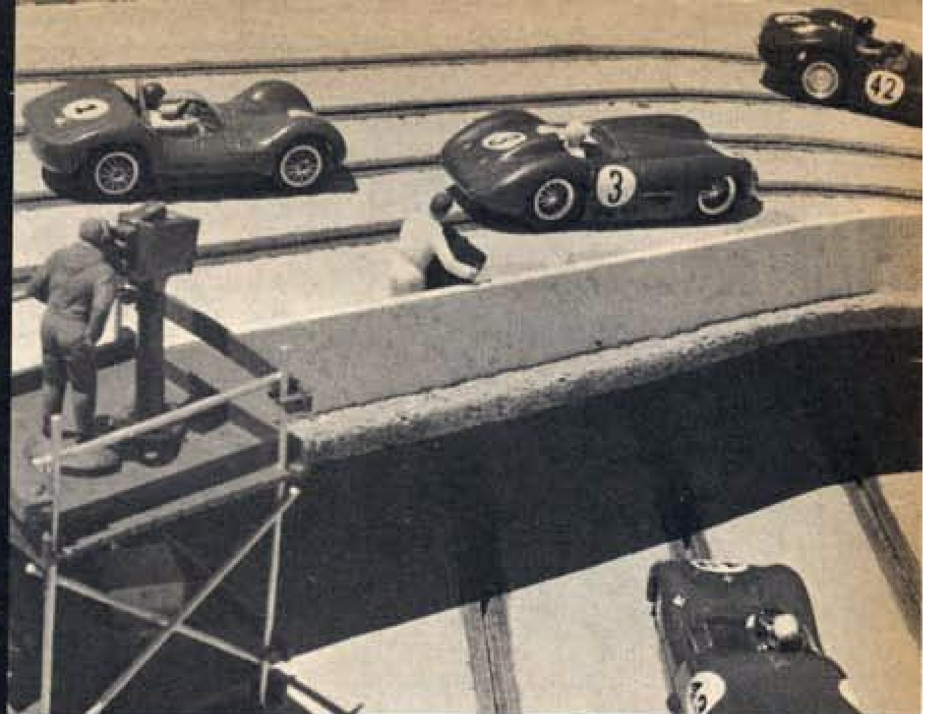
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THE NUMBER ONE MAGAZINE of MODEL CARS



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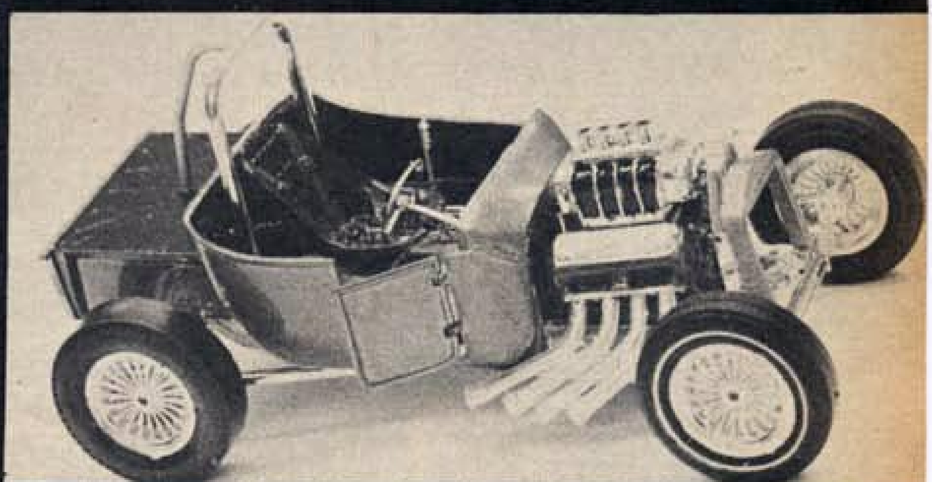
Each Issue MODEL CAR SCIENCE brings you the complete story of model car building and table top racing **exclusively!** Every page is packed with exciting reports on new models and informative articles on how to build great cars. If you are a model car enthusiast . . . if you want to join in the fun of table top racing . . . MCS is the magazine for you. Make sure you get each copy, fresh off the press. Take advantage of this special subscription offer. Write Today.

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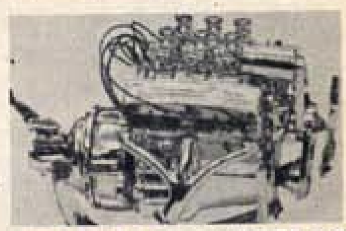
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model car *Science*

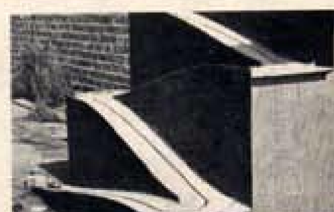












COVER — There's a world of model building skill on display on this month's cover. The great Willys hot rod is the work of Jim Jenkins. Those two wild pick-ups are by Bob Wagner and Don Lenaker. All of them are covered on page 26. The slot racers in action are but a preview of our big Table Top section. Photos by Jim Miller

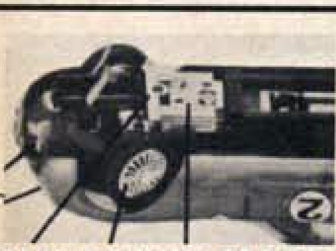
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MODEL MAIL

FAR AWAY FAN

We here in the Virgin Islands are rather backward about this new sport of table top racing. One of us went to England where he brought back some cars and track. We have put together rules from what we know about full-size Grand Prix racing. But we find it a lot of fun and welcome all of the information that you supply in MCS. One question: in your April article on how to build a track you mention braided wire as an excellent conductor. Where can we find that wire?

RICHARD DIVALD
St. Thomas, U.S. Virgin Islands

That tin-coated, copper braided wire is manufactured by a number of electronic suppliers for use as ground straps. A double-thickness type (good for pick-up brushes) is produced as a sleeve for microphone cables.

SANDING TIP

I have a suggestion to make concerning the use of Flexi-Grit sandpaper or any sandpaper when used with a sanding block. Put a layer of foam rubber about ⅛-inch thick around the block. This will prolong the life of the sandpaper by about three or four times. When used wet, the sanding surface will stay moist longer since the foam rubber does absorb water.

DARYL JAGELS
LuVerne, Iowa

UNBELIEVER

Who are you trying to kid? All of this jazz about racing modifications on those silly little toy cars is ridiculous. Put four wheels on an electric motor and you have the ultimate slot racer. Far-out chassis designs, exotic steering assemblies and all the gears in the world don't mean one tenth as much as being able to keep your guide in the slot. I'm getting pretty disgusted seeing grown men wasting valuable time on toy cars. Slot tracks are for kids.

W. H. BURDETTE
Glendale, Calif.

NO SCRATCH FOR BUILDING

Your stories on how to build great customs and hot rods from left-over plastic components are great, but very frustrating. Many times I'll have all the pieces needed but three or four. It hardly seems worth while to buy a full kit just to get another wheel or seat.

BOB McGUIRE
Chicago, Ill.

Check page 37, Bob, for an inexpensive way to get an extra set of those needed parts.

PLAN WORKS

I built a slot racing chassis following your plan (April, MCS) and was very pleased with the results. I had tried to build a car before but, without a plan, it never quite worked out. Keep up the good work, and let's hear more about steerable front ends, new guide methods, etc. I for one am ready to start on these new ideas right away.

THOMAS E. BATEY
Costa Mesa, Calif.

MODEL CAR CONTEST

I'm building what I think to be a real prize-winning model. But I don't want to rush. Will I still have the chance to enter your model car contest in a few weeks?

BILL COUPE
Lincoln, Nebr.

The MCS model contest will be a regular feature each issue. Whenever you finish a top car, be sure to send its portrait to our contest editor. Full details are on page 35.

NINE OR TWELVE?

The article on electric motors for slot racers in your June issue stated that the 704A Pittman was wound for 9 volts. I recently purchased a 704A and the information sheet which came with it states that the motor is for 12 volts. I would like to know if there is anywhere that I can purchase one of the 9-volt motors, or was this just a typographical error?

A. L. MOSES
Columbia, S. C.

It's not a typographical error, Mr. Moses, and you already have the 9-volt Pittman in question. The ohm resistor windings are for 9, but the motor is meant to operate at 12. This is the modification which makes the motor more effective than its predecessors.

TRACK TALK

I do quite a bit of traveling and am also an avid table top fan. Is there by any chance a listing of table top tracks in operation across the country?

ARTHUR THOMPSON
Philadelphia, Pa.

We know of no complete listing. In coming months, however, MCS will supply a free directory service for all active tracks. Dealers should see the ad on this page for details.

SEA HUNT

I know that the name of the book is "Model Car Science" but can't you run just a few stories on model planes? Let's face it . . . plane makers are still the real pros of model building. Showing some of their work would be inspiring to the car fans.

JOHNNY HEITZ
Portland, Ore.

'55 Chevrolet

½ INCH SCALE

1/24th ACTUAL SIZE

Customizing Kit

Two Body Colors

Mandarin Red · Teal Blue

either color...
any way you
put it together...
IT'S GREAT!





Darryl Starbird Customizing

Custom features by one of nation's top customizers and stylists. Now Monogram Custom Consultant.

1. **Stock Hardtop**
2. **Continental Type Hardtop**
   Bullet Headlights, Shaved Hood, Etc.
3. **Futuristic—Bubble Top**
   Roll Pans, Custom Hub Caps, Bucket Seats
4. **Stock Convertible**







Today's Big Custom Favorite

In a Big Build-It-Your-Way Kit

The 1955 Chevrolet is today's big attraction for customizers and car stylists. And all the thrills of model customizing are in this new one-half inch scale Chevy kit by Monogram.

The modeler can have a grand time with this complete, thoroughly engineered and fascinating kit. Customizing features, including a futuristic bubble top job are by Darryl Starbird, one of the leading stylists and car rebuilders.

Kit provides complete interior and underbody detailing. Simulated upholstery. Three different tops—stock and Continental hardtop and bubble top model—plus the convertible top boot. Regular and bullet type headlight lenses and custom stop and spot lights. Separate windshield and window glass sections. 53 of the 130 parts are chrome plated.

130 COLORED, CLEAR AND CHROME PARTS

Some Customizing Parts:

- 3 Tops—Continental, Bubble and Stock
- Custom Engine
- 2 Custom Grilles
- Bucket Seats
- Center Console
- GMC 6-71 Blower
- 3 Carburetors
- Custom Headers
- Plated Finned Rocker Covers
- Generator
- Oil Pipe
- Side Pipes
- 2 Bumper Strips
- 2 Sets Hub Caps
- Regular and Bullet Type Headlight Lens
- Custom Stop and Spot Lights
- Fender Skirts
- Fins
- Simulated Interior Upholstery
- Roll Pans
- Separate Windshield and Window
- Glass Sections
- Fire Extinguisher
- Tachometer

MANDARIN RED BODY or TEAL BLUE BODY — KIT PC83 **$1.98**

Another Monogram first permits you to make your Chevy in your choice of two colors **without painting.** Body color is teal blue or mandarin red. Select your color when you get your Chevy kit at your favorite store.

Monogram Models, Inc. Morton Grove, Ill.

Monogram

the NAME FOR *Quality* HOBBY KITS

NEW TO SCALE



X-Acto, the leading hobby tool maker, announces a "customizing kit" for the model car enthusiasts. Containing the six basic tools needed for work with plastic cars: two knives, a pin vise, long-nose pliers, tweezers, files and a saw. This $6.50 value is offered for $5.50 at your local hobby shop.



This metal spray gun applies all types of paint that are used in model work. It will spray candy or metallic colors and operates right off of any vacuum. All attachments and full instructions are included in the $4.45 price. Auto World, Dept. M3, Box 961, Scranton, Pennsylvania.



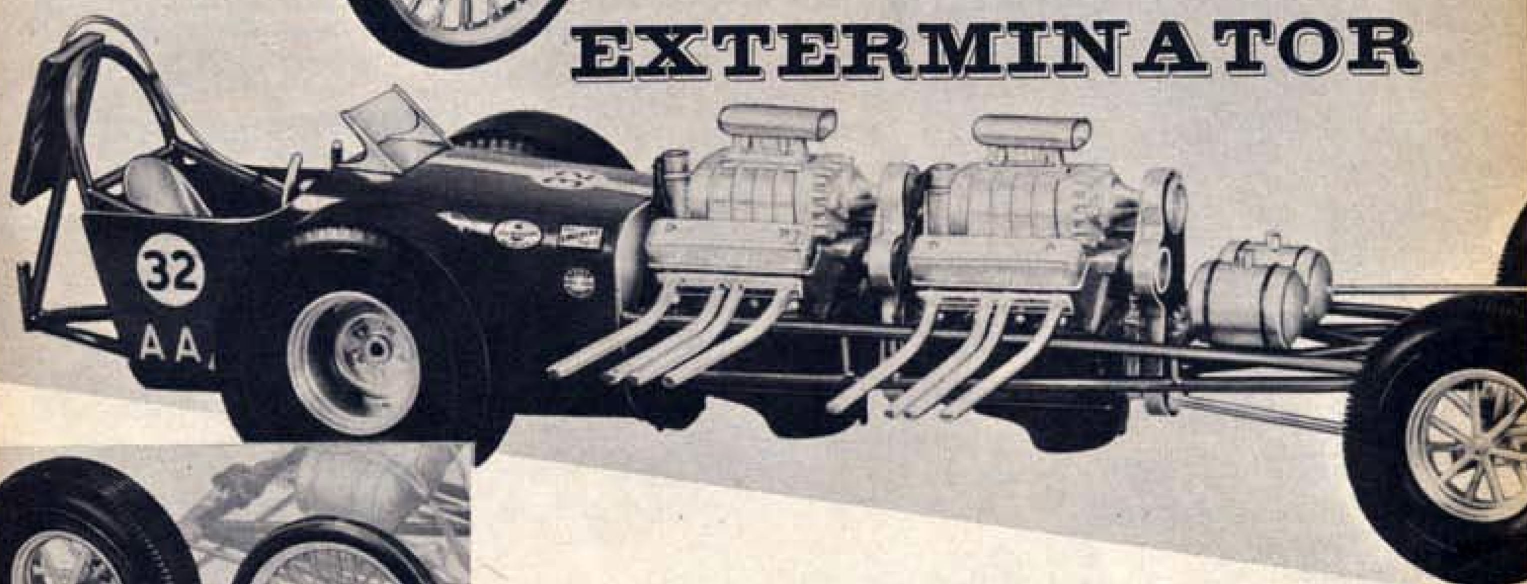
This electric lap counter for slot racers operates on nearly all tracks made. As the car passes over the tape, current is passed to the counter and activates the two independent lap indicators. Authentic in detail, it sells for $15. Pacific International Ltd., Dept. MCS, Ferry Building, San Francisco, Calif.

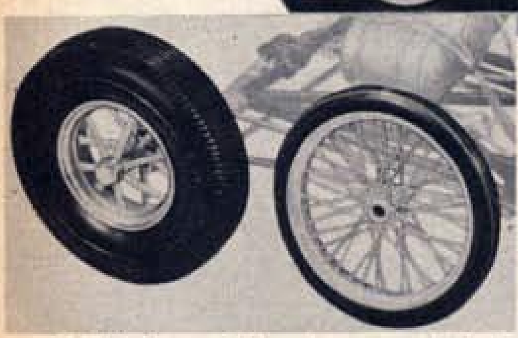
FIRST REPORTS

what's NEW in CAR KITS



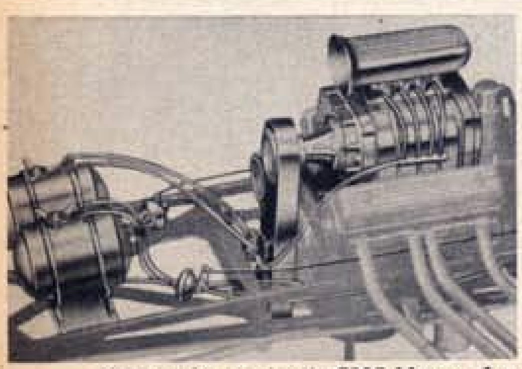
EXTERMINATOR



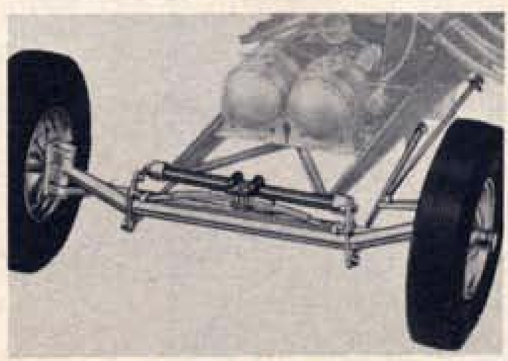


Builder has a choice of two sets of wheels in front: magnesium (left) or wire.

These days more and more modelers are thinking big. No wonder when kit makers are announcing such large scale great ones as this all-out dragster by Lindberg that is two feet in length and perfect in every detail. This two-in-one kit lets the builder decide on one or two engines, based on the Ford 292-cubic-inch block. He can choose carburetion by six Stromberg 97's or go for dual superchargers. Operating mechanisms include steering clutch and differential.



Option for engine is GMC blower that can be mounted on top or front of Ford block.

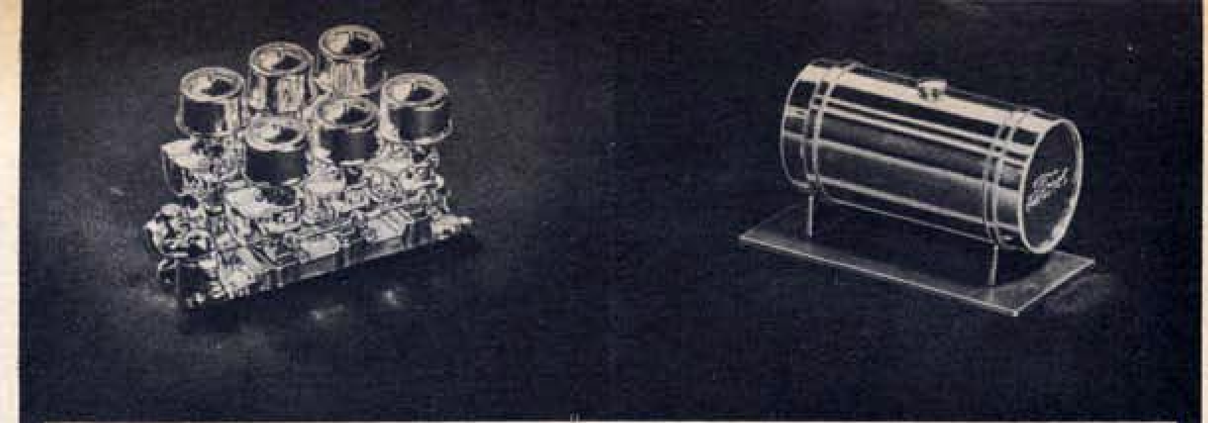


Attention to detail on the Exterminator is carried through to an operating steering gear.

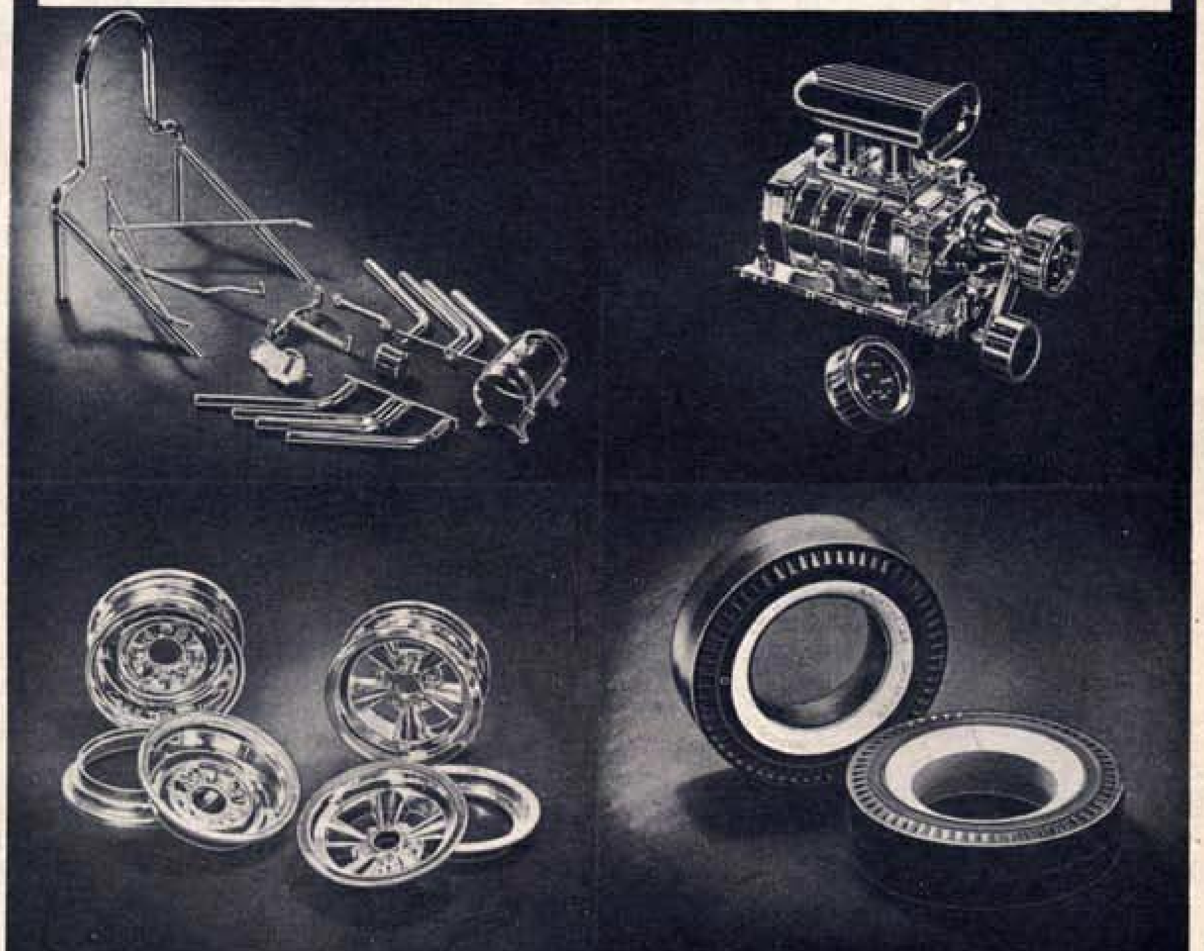


Further details of the steering gear are seen here, also manually operated clutch.





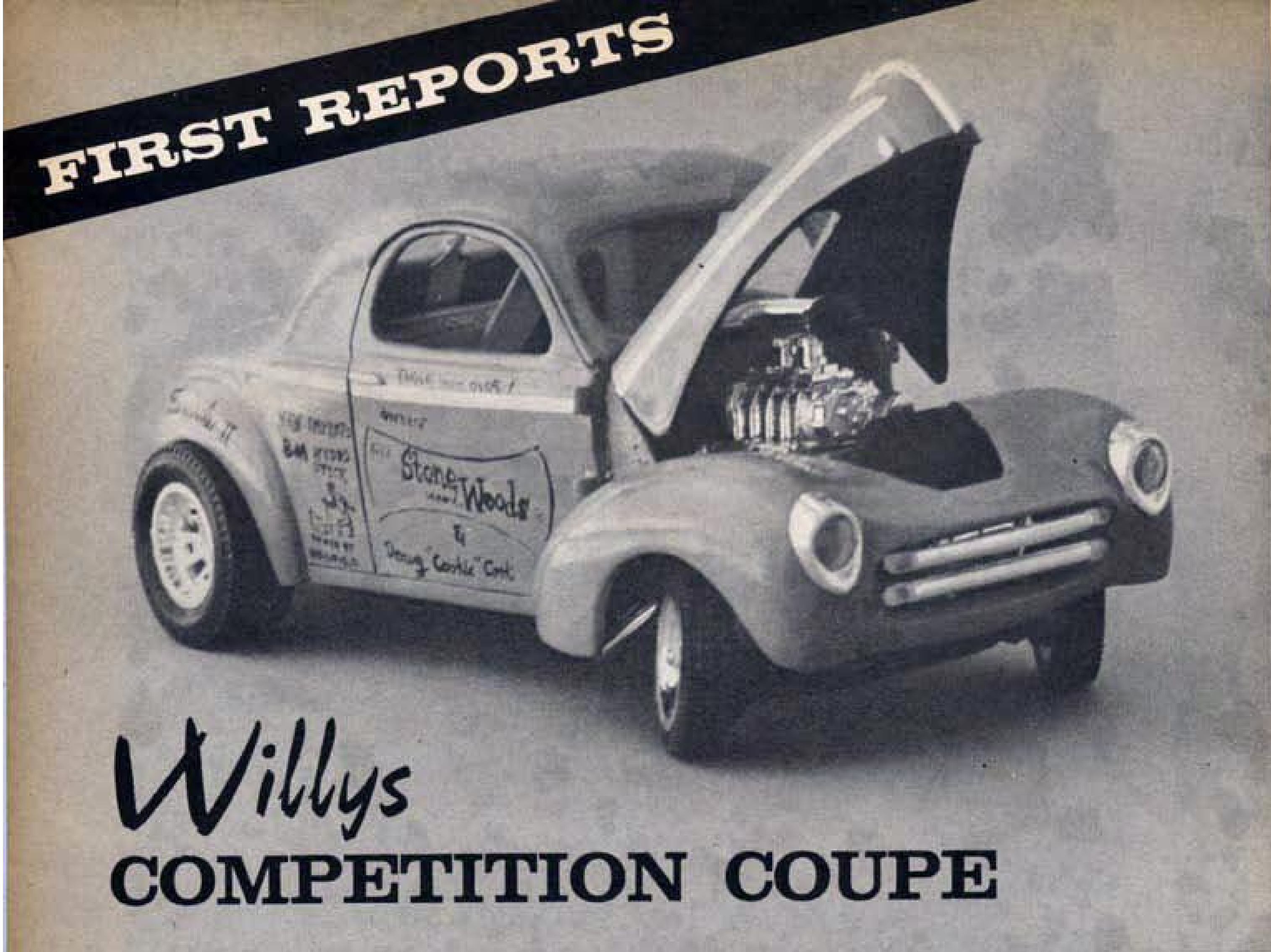
custom accessories
FOR THE "BIG" ONES





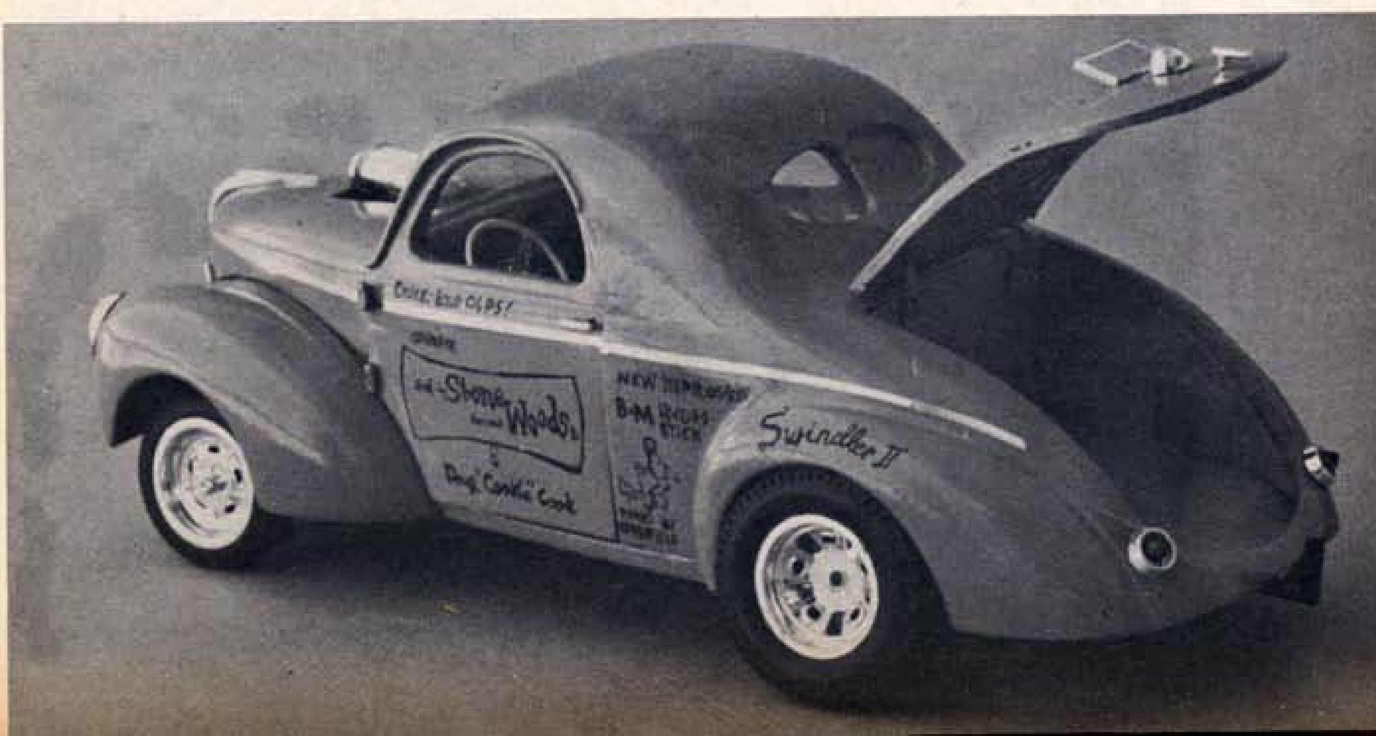


Monogram, pioneer in the increasingly popular one-eighth scale, now offer custom accessories that will allow builders to scratch build new "big" models or to modify such kits as the "Big T," "Big Drag," Big Rod" and "Big Bucket." Accessories, shown from left to right, are: a six-carb set with manifold, carbs, air cleaners, outlets and linkages; an oval gas tank; a racing set with roll bar, push bar, fuel tank, tachometer, racing wheel, shift and exhaust; a GMC blower set; chromed wheel set; white wall drag slicks and a white wall tire set. Prices range from 59 cents to $1.



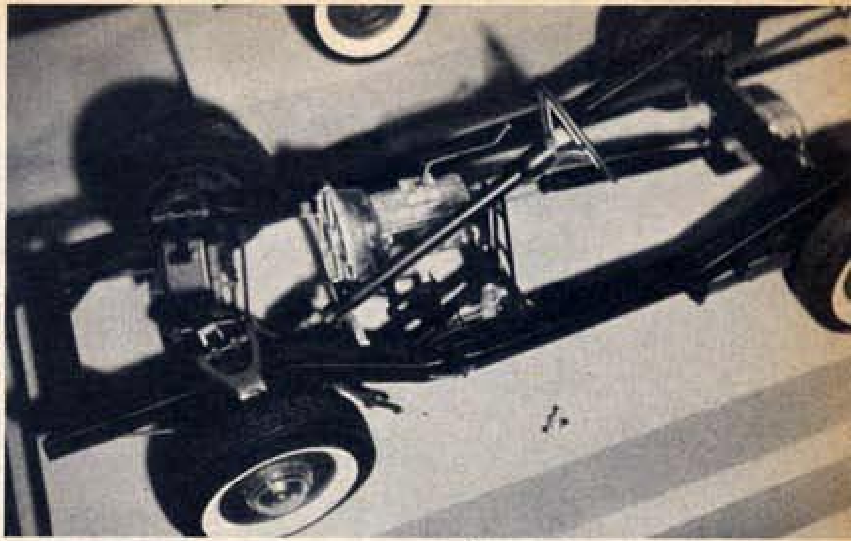
Willys COMPETITION COUPE

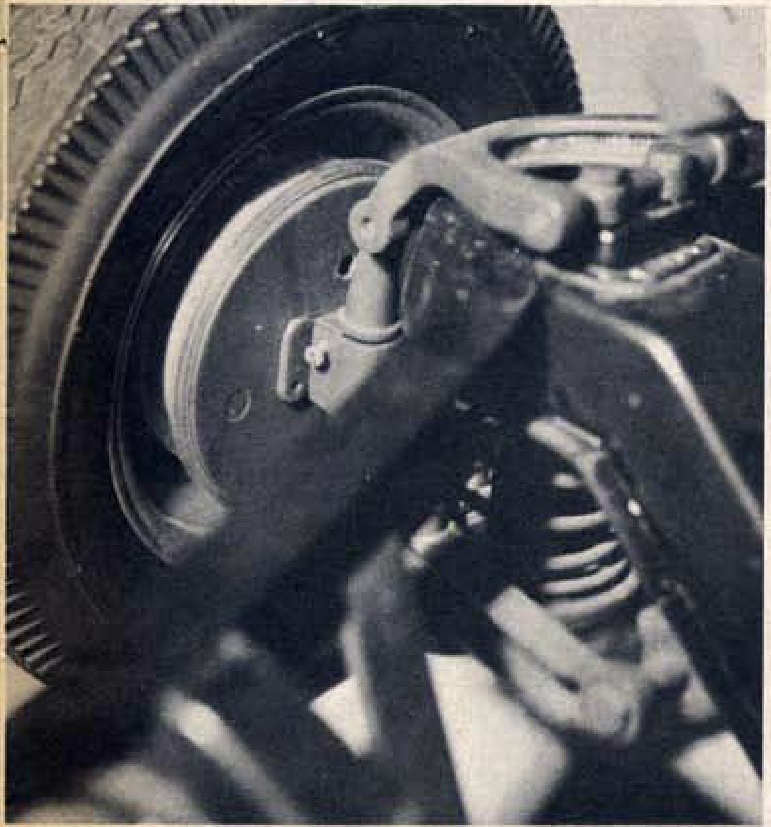
Revell's new series of Speed and Show Authentics is now joined by one of the most successful performers from the nation's drag strips, the Stone-Woods-Cook Willys Coupe. This NHRA record holder has a blown Oldsmobile engine and its authentic model has opening doors and trunk. The custom interior has bucket seats and there are full decals and speed equipment.

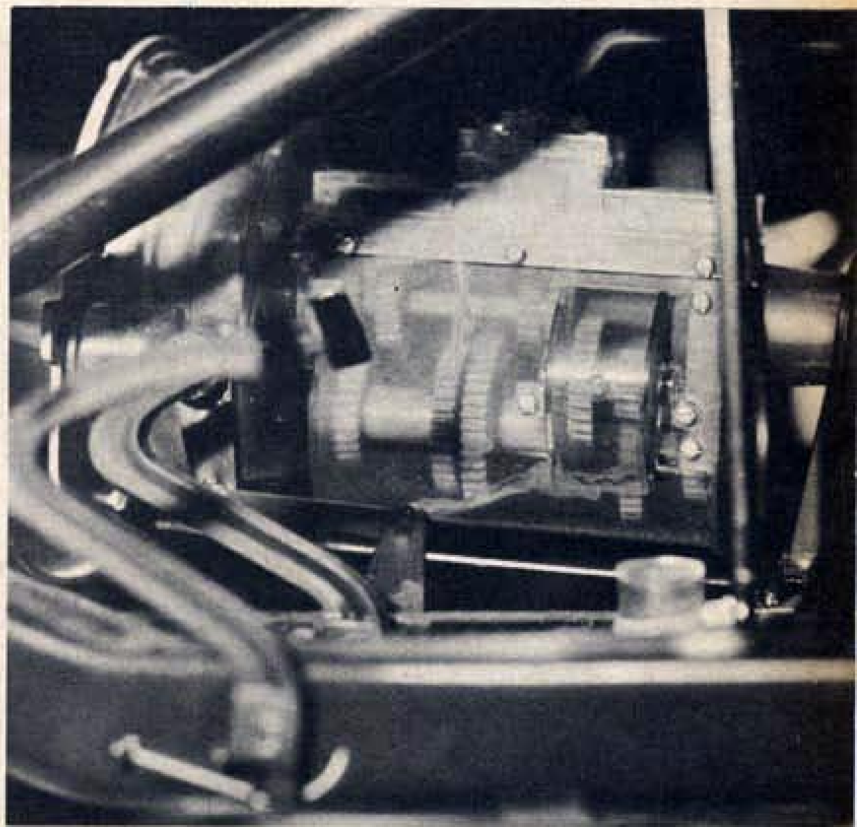


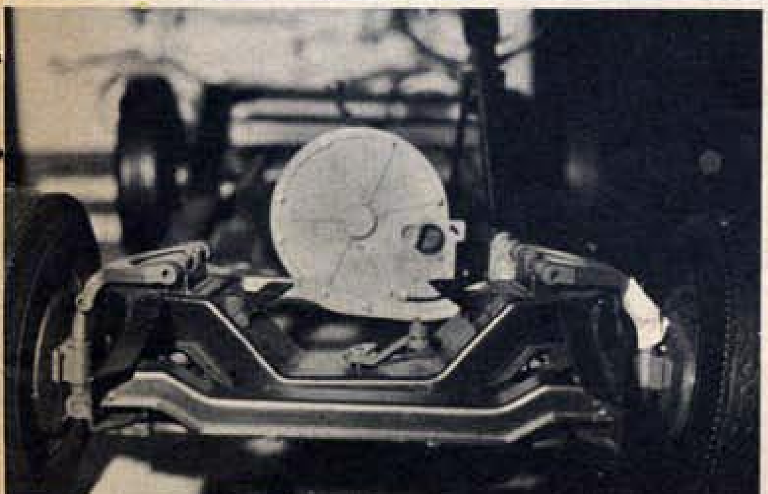
VISIBLE Auto Chassis

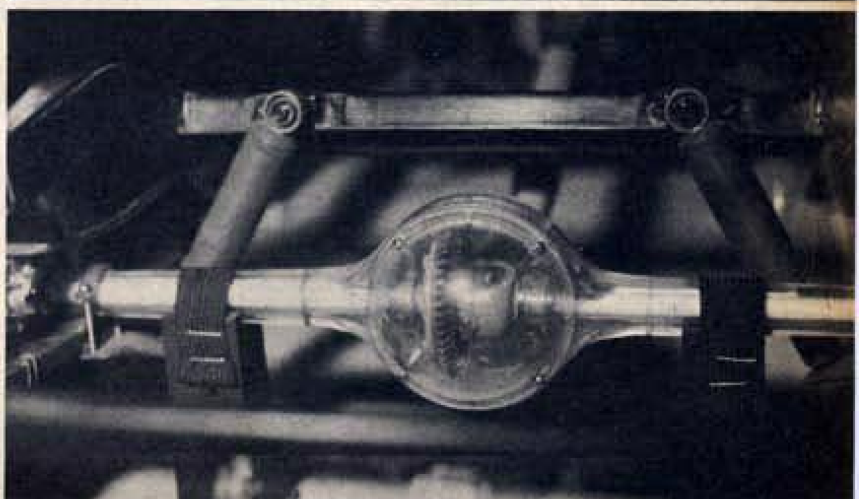
Renwal, the model maker that has specialized in the "visible" series of kits, now offers the Visible Automobile chassis. Scaled to the same size as Renwal's popular Visible V-8 engine, this full chassis has working steering, brakes, clutch, transmission and differential, and you can see all of the working parts since their housings are of clear plastic.











the MCS-XI

Beginning a new step-by-step project. Build a great dream car... and learn the secrets of

WORKING WITH PUTTY

BY JIM WARREN

The MCS X-1 project on these pages marks the first of a series that will take the model builder step-by-step through a line of exciting cars. Not only will each car be an outstanding custom, we will explain in each issue a special and supposedly difficult facet of the modeler's art.

This time we explain how to use body putty while building a true dream car. It wasn't too long ago when model builders had to experiment with all sorts of sticky stuff trying to find a suitable putty. Now two model manufacturers, AMT and Pactra, offer special putty for customizing. And Duratite Surface Putty works equally well for these precise jobs. Here is exactly how it is used.



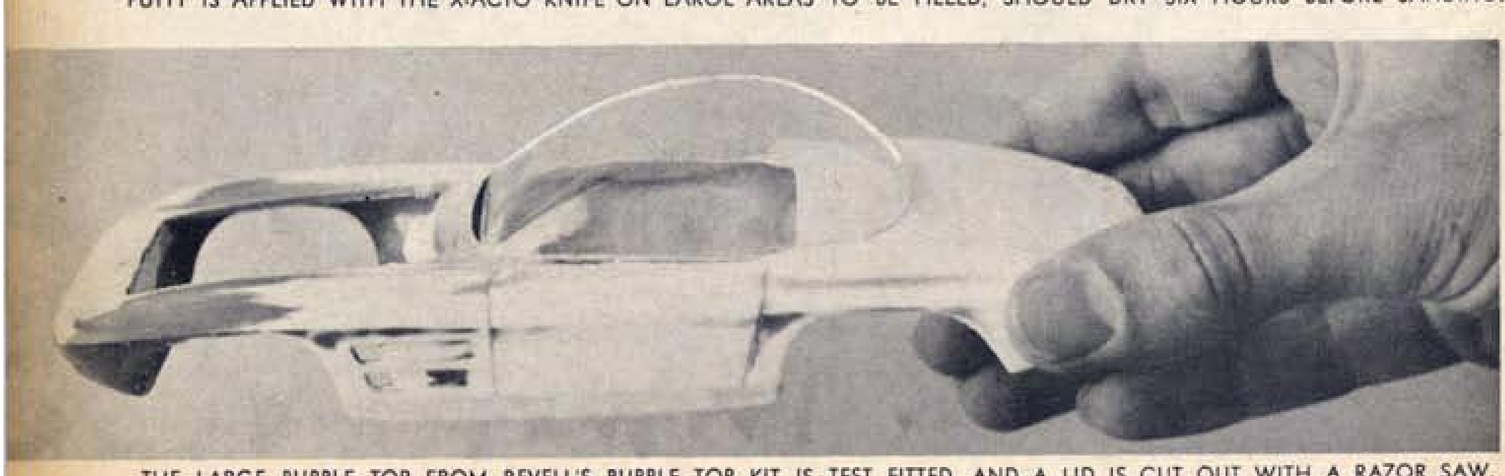
Basic tools, above right, include drill, knife, assorted files, razor saw, 400 and 600 sandpaper.



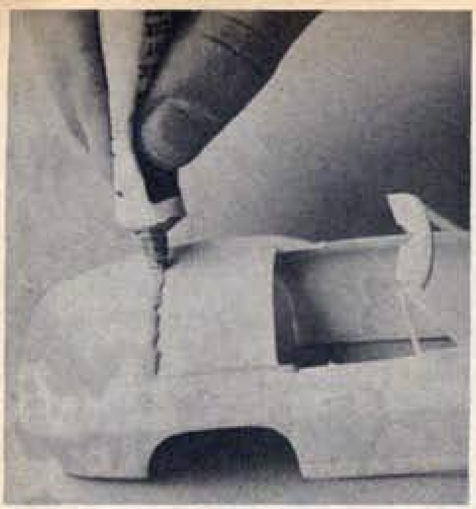
Two putties, right, AMT and Pactra, work extremely well for the dream car, as does Duratite Surface Putty.



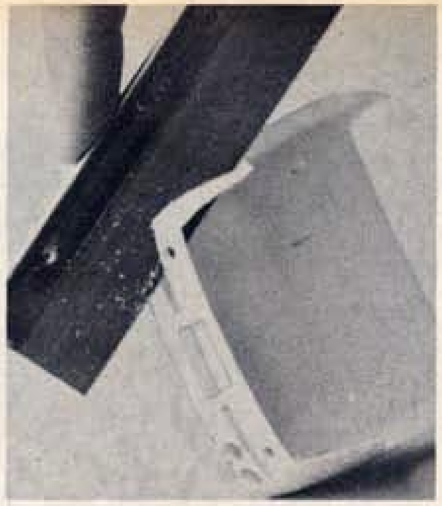
PUTTY IS APPLIED WITH THE X-ACTO KNIFE ON LARGE AREAS TO BE FILLED, SHOULD DRY SIX HOURS BEFORE SANDING.



THE LARGE BUBBLE TOP FROM REVELL'S BUBBLE TOP KIT IS TEST FITTED, AND A LID IS CUT OUT WITH A RAZOR SAW.



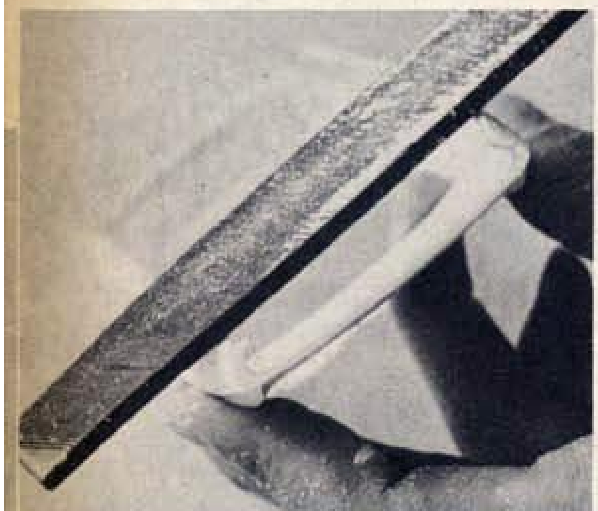
Putty may be applied directly from the tube to fill in small door lines, other of the tiny body details.



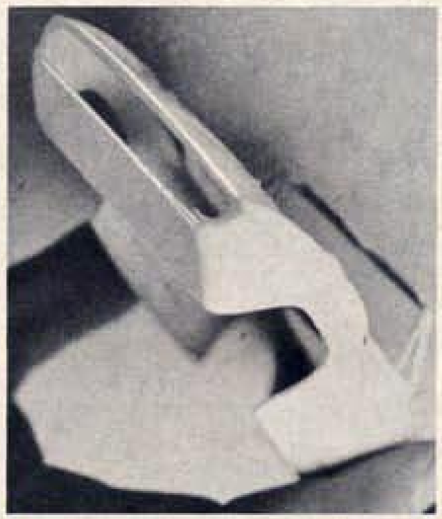
An X-Acto saw is used to remove a small portion of the body behind the rear wheels. Use care.



The back of the body is cut off absolutely flat to allow the installation of a customized bumper.



Use the large file to flatten out unsightly bumps, thereby making the rear end installation much easier.



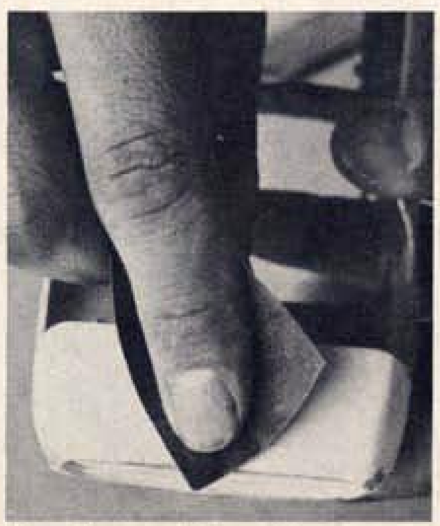
Use a flat piece of plastic from AMT's '63 Ford truck, cement in place as rear pan. Trim smooth, fill holes with putty.



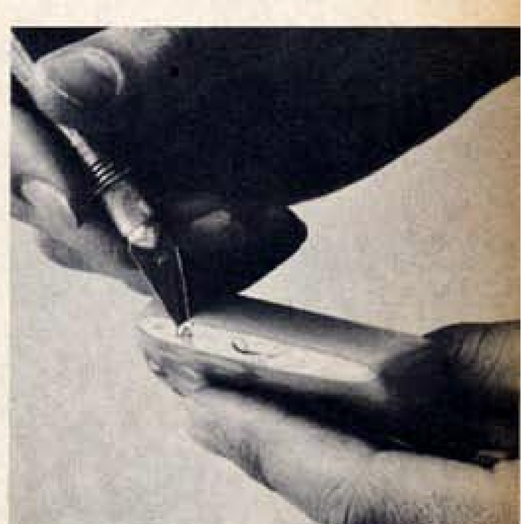
Rear bumper from Revell's Dream Car Grille Kit is sectioned in the middle to fit AMT Stingray. Cement to car.



Body putty must be applied with as much care as possible to the rear deck, let dry thoroughly.



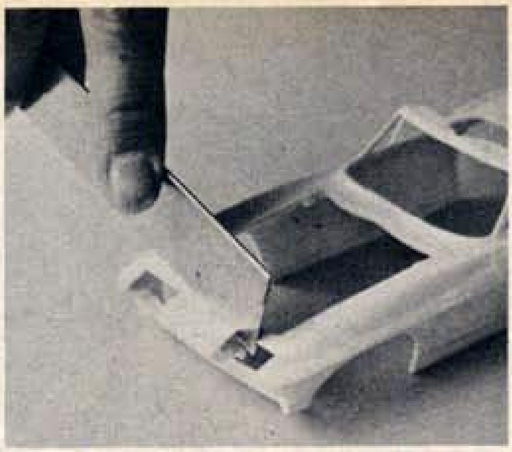
After the putty is dry and hard, it must be filed to shape, then sanded to desired finish smoothness.



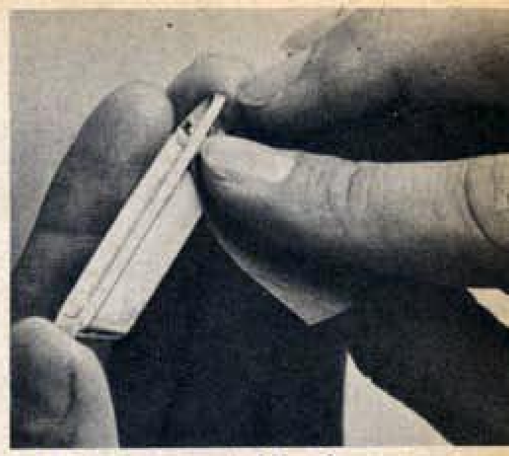
Modeling clay has been used to fill in the area, just prior to painting with AMT's primer coat finish.



At the front end of the car, cut off the parking light mounts and file the area smooth.



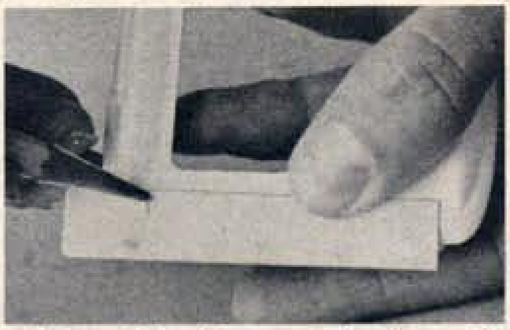
Using the razor saw, remove the center area between the headlights. Patience and a steady hand pay dividends here.



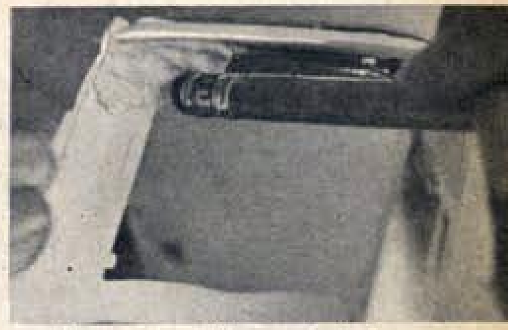
You must now sand the chrome from the rear portion of the grille you choose to use on this car.



The grille should be positioned exactly as desired, then cemented carefully into place.



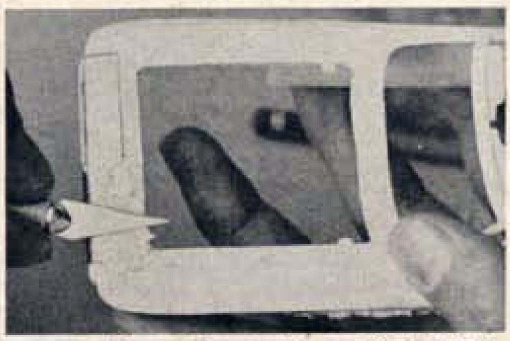
A piece of plastic is measured and cut to fit the hole area above the grille. Scrap material may be used for this.



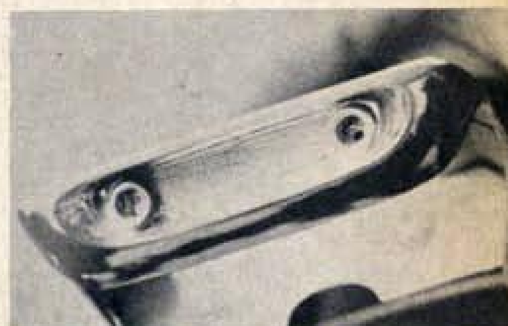
After cement dries, apply body putty behind grille. Use pencil eraser to tamp putty in place.



The scrap plastic filler for the hole above the grille should be cemented into correct position.



More putty must be applied to fill in the cracks. After it dries, sand the area with No. 400 wet or dry sandpaper.



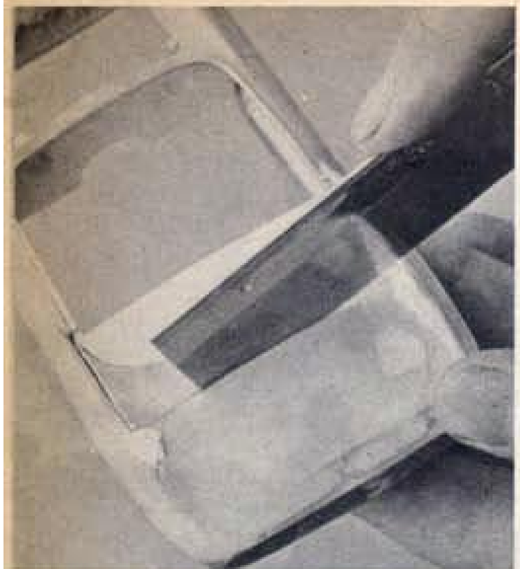
Here is the completed front end, shown ready and awaiting its final coat of primer finish.



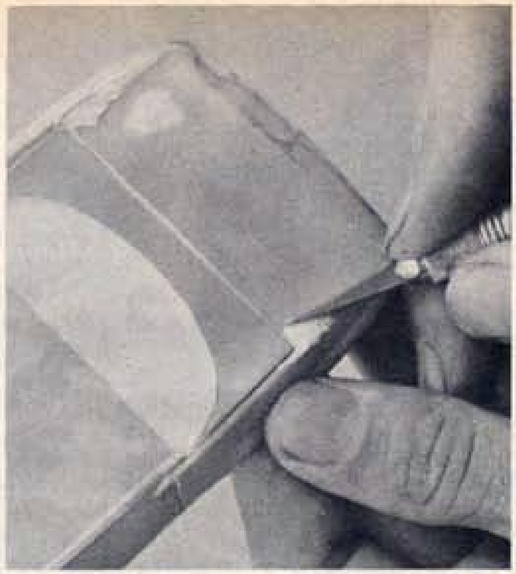
After sanding area around grille smooth, put modeling clay in grille opening.



The modeling clay that has been placed in the grille opening is used to protect the chrome finish while applying the primer.



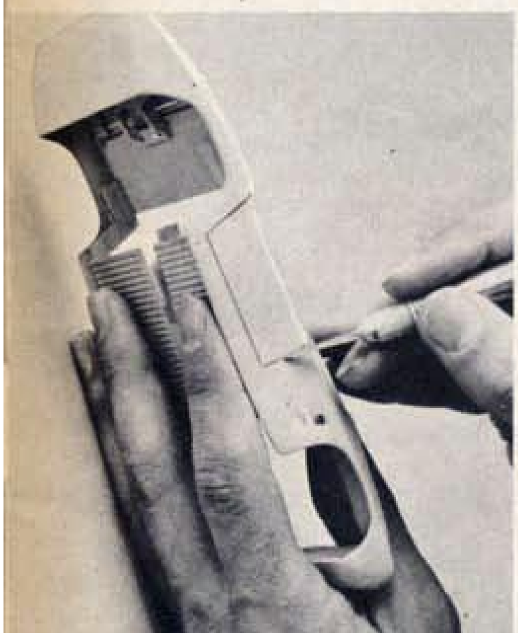
The bubble top requires a lid to be cut from it. Hinged top details will be in the next issue.



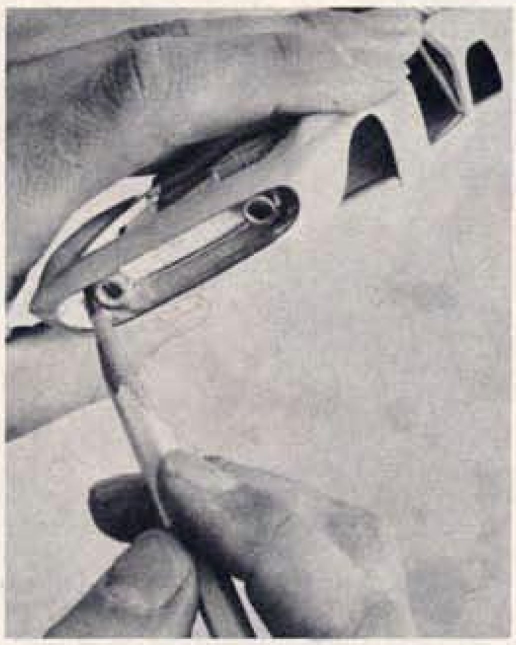
Areas around the cut are filled in with the appropriate putty, and the entire rear deck area is sanded smooth.



Sanding of the rear deck should be done wet, first with 400, then finish with a 600 grit paper.



Because only left door will open, right-hand door lines are emphasized with an X-Acto knife.



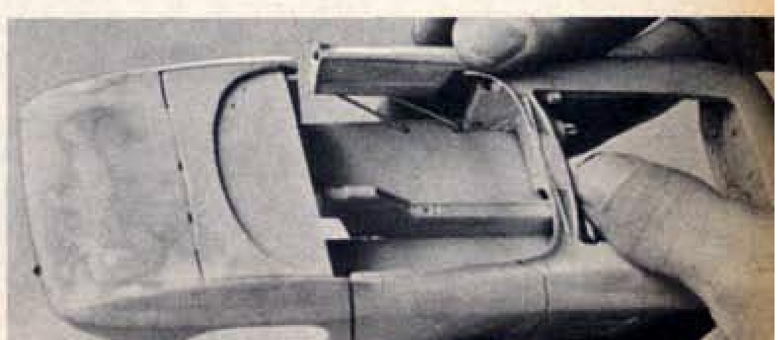
After the body has been painted its final color, the temporary modeling clay is removed with a pencil to avoid damage to the chrome.



This beautifully completed body is now ready for final details — frame, engine and the interior.

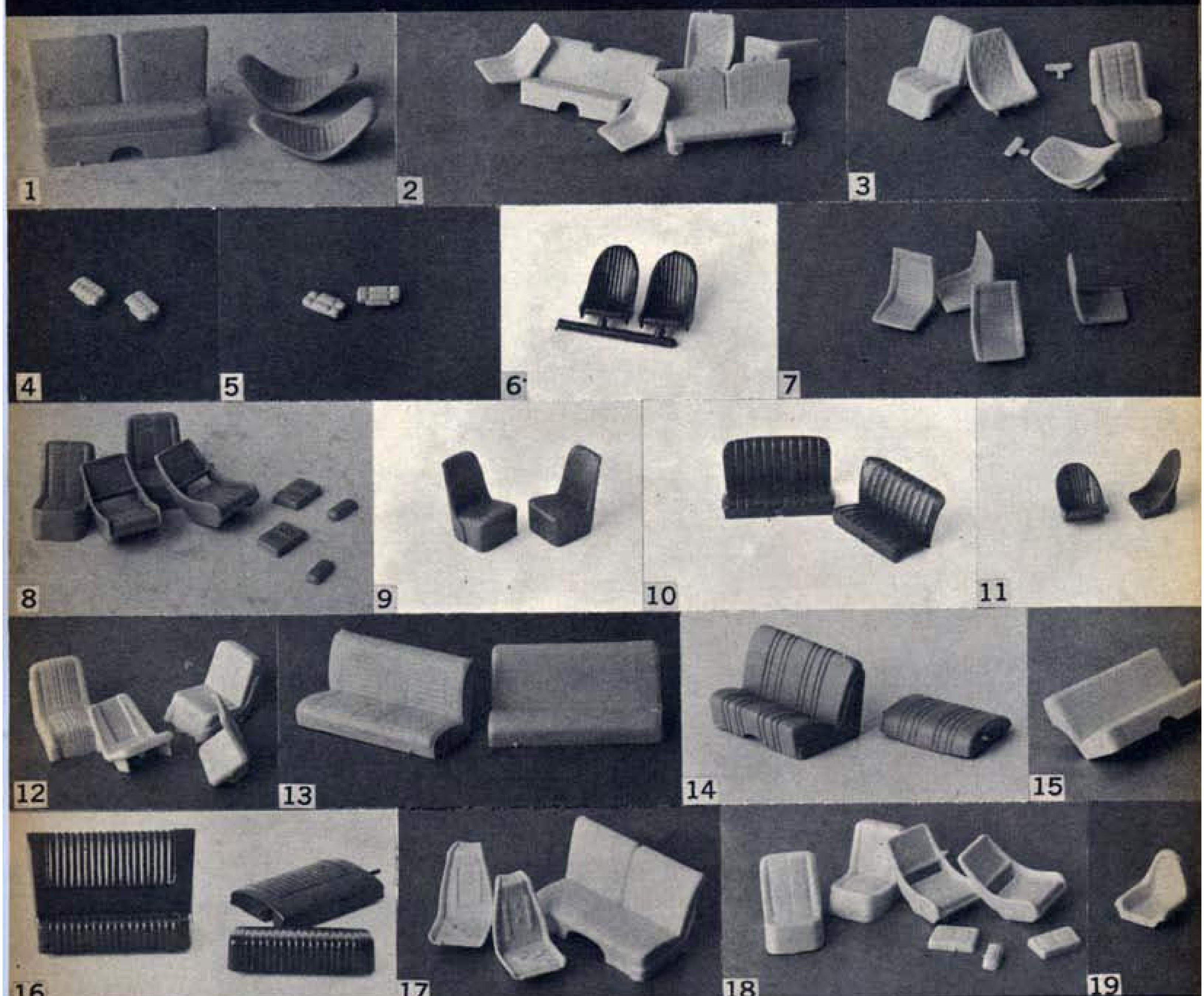


Still to come are the secrets of hinged bubble top, operating door latch and working head- and taillights.



In the next issue of MCS, detailed instructions will be presented on how to make swing-away opening doors.

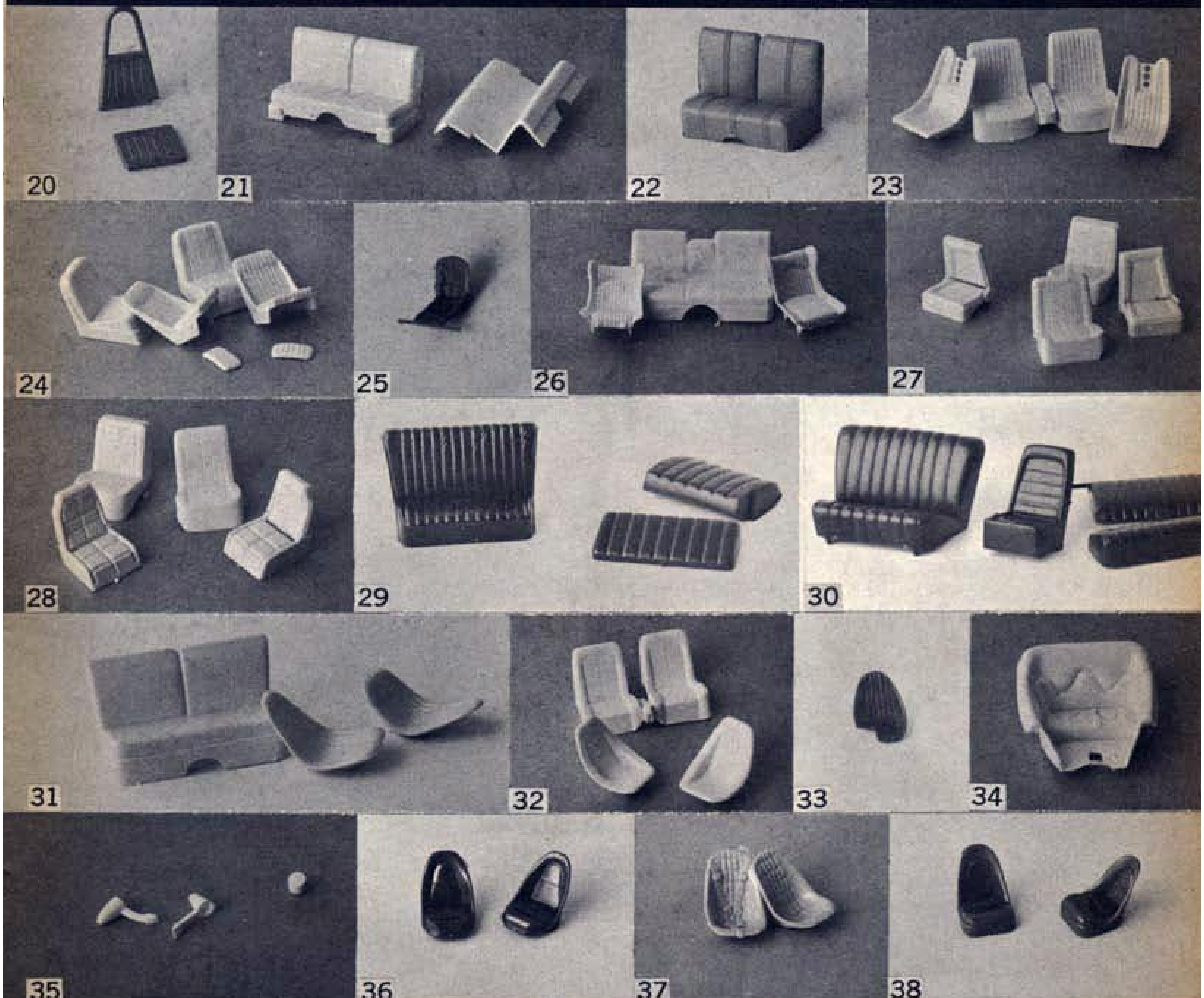
SEATS SEATS SEATS



1. AMT '49 Ford
2. AMT '57 Ford
3. AMT Buick Riviera
4. AMT Chevy II Convertible
5. AMT Lincoln Continental
6. AMT Model T
7. Revell Interior kit
8. AMT Ford Fairlane
9. AMT '34 Ford truck
10. Monogram Phaeton
11. AMT Dragster
12. AMT Ford Galaxie
13. Revell '56 Ford
14. AMT '36 Ford
15. AMT Chevy II Wagon
16. Monogram '36 Ford
17. AMT '57 Chevy
18. Ford Fairlane hardtop
19. AMT Ford pickup — go kart series

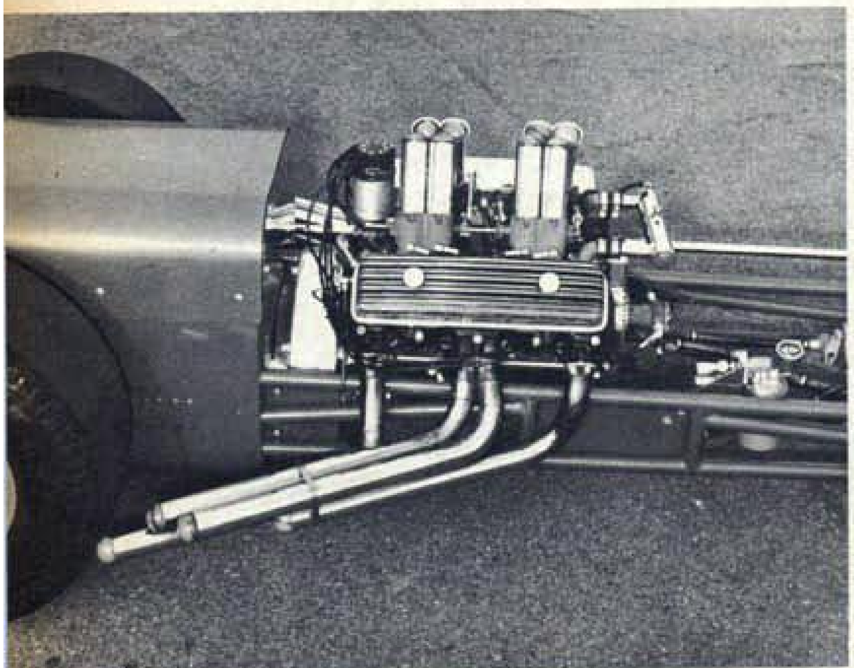
AN EXCLUSIVE MCS SURVEY OF NEW SHAPES IN SEATS FROM CURRENT KITS FOR THE CUSTOM BUILDER

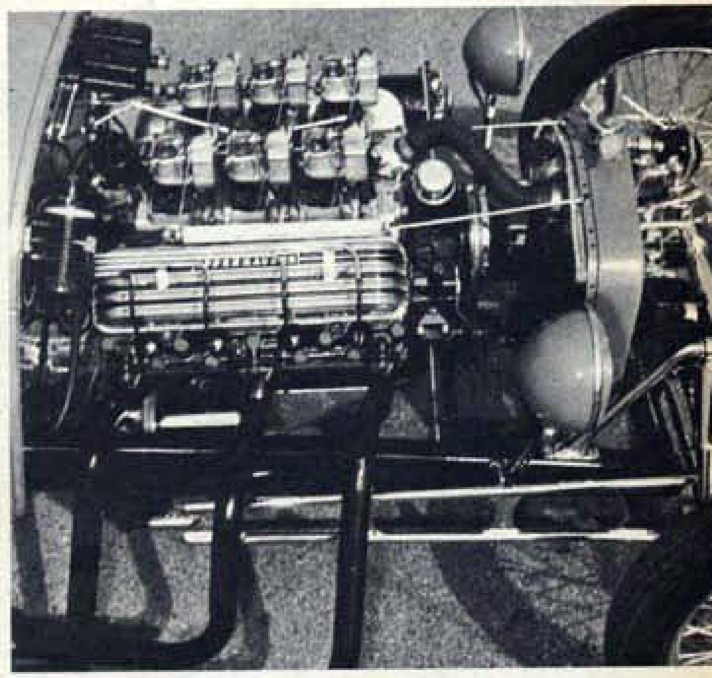
The fun in custom building lies not only in creating a car unlike any other, but in finding the components to do the job. Top builders have learned to save all left-over pieces from every kit for they will be valuable in the future. Here is the first in an MCS series of surveys of custom components. Keep it for reference.

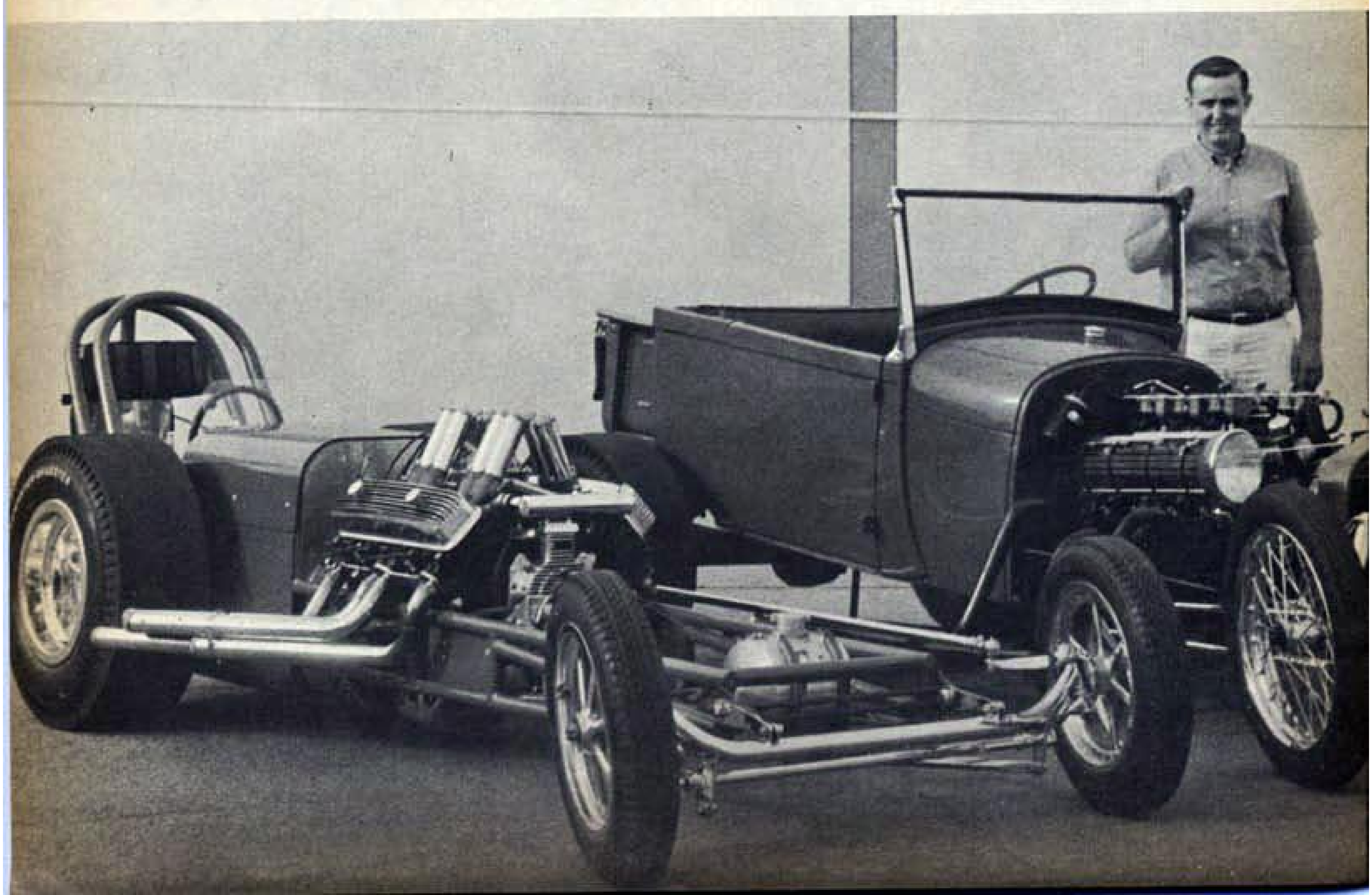


20. Monogram dragster
21. Revell '57 Chevy
22. AMT '40 Ford Sedan
23. AMT Buick Convertible
24. AMT Mercury
25. Revell Challenge I
26. AMT Imperial
27. AMT '63 Pontiac
28. AMT Chevy Convertible
29. Monogram Model A
30. Monogram '34 Ford
31. AMT '50 Ford
32. AMT Tempest
33. Revell IVO dragster
34. Revell Outlaw
35. AMT T-Bird
36. Aurora Jaguar XKE

GREAT CUSTOMS
...AND HOW TO



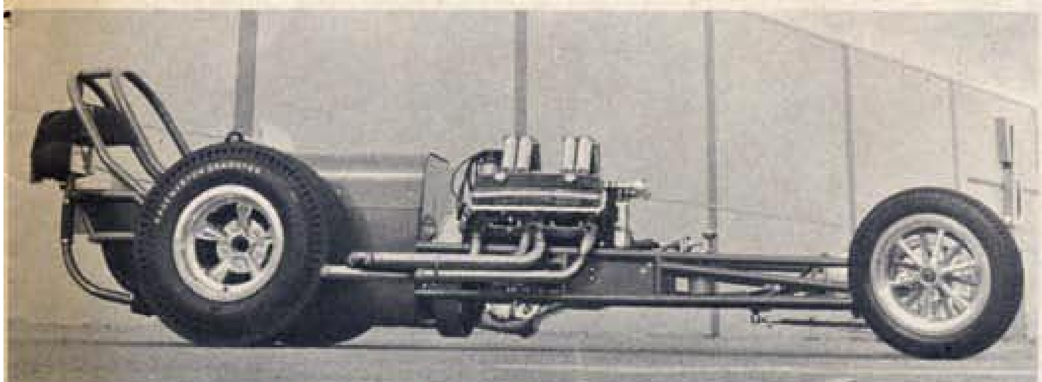


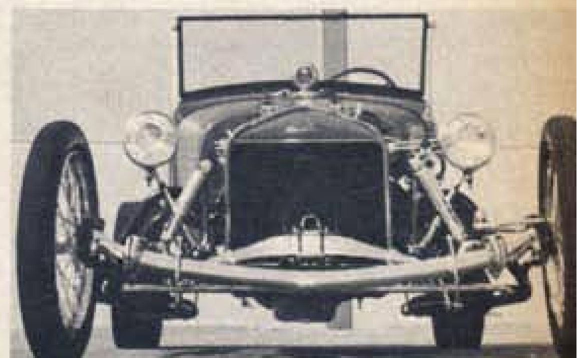


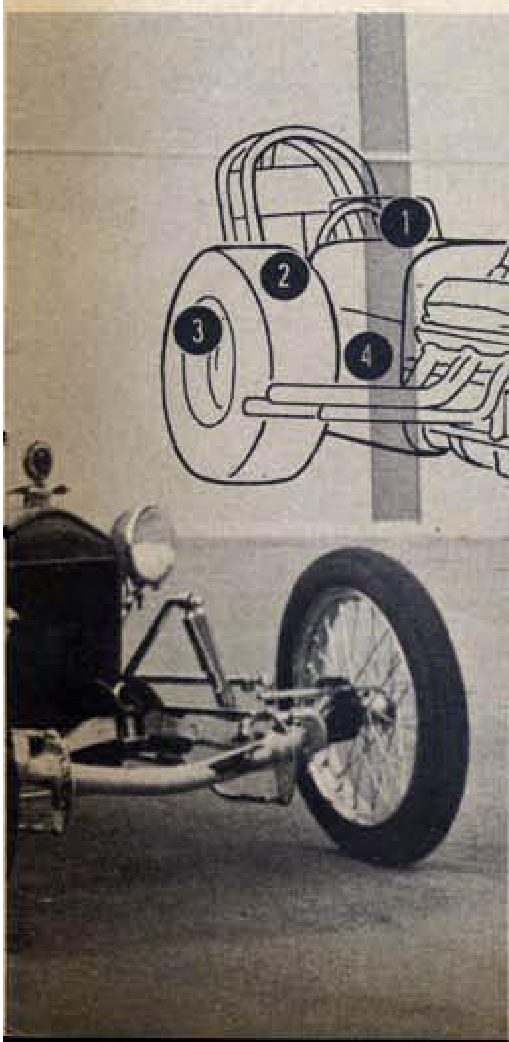
and HOT RODS
BUILD THE MODELS

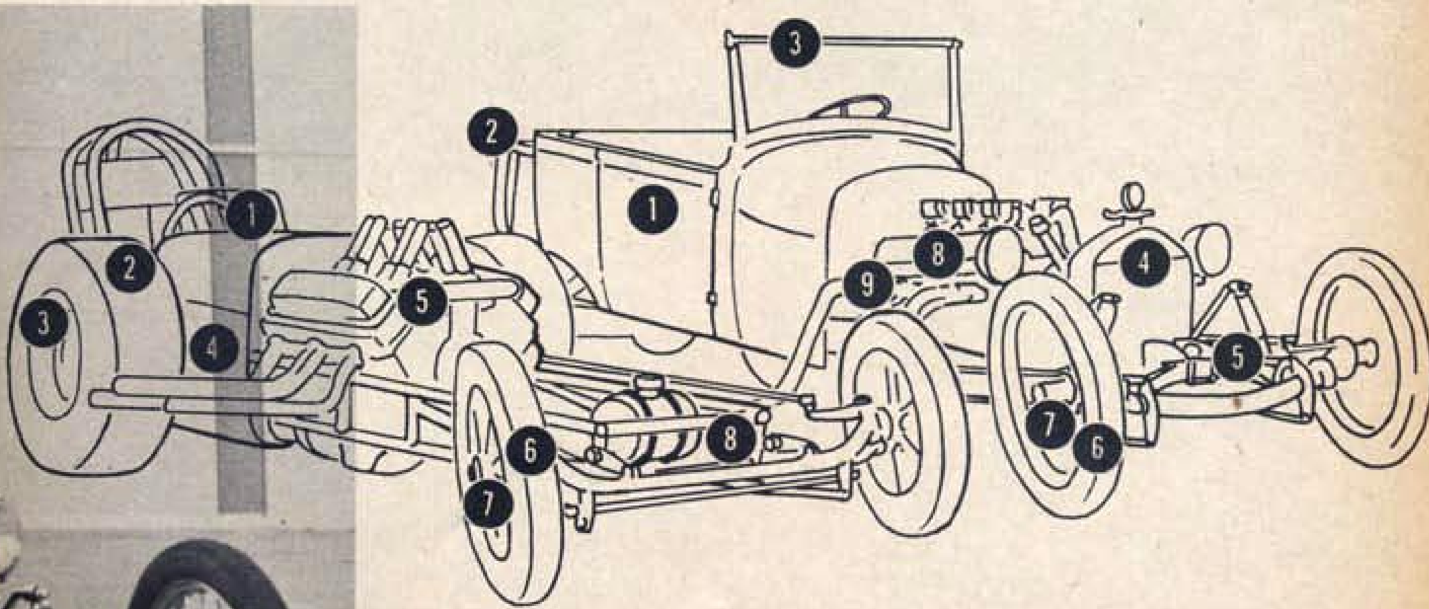
DRAGSTER with ROADSTER to MATCH

Here is a chance for creative modelers to build a hot rod stable – a roadster for the street, a dragster for the strip. Ron Kiker owns the full-size versions, and has painted them in matching vivid red. The dragster is built on a Dragmaster chassis, carries M&H slicks on American Racing magnesium wheels. It turns outstanding ET's from a 370-inch, '56 Olds engine with Hilborn injectors. A parachute is mounted at the rear. The frantic roadster is a '29 A with a 12-inch-long pickup box, T radiator shell and motorcycle wheels on front. The front end is a Ford tube axle, Model A springs with '48 Ford reversed spring perches and '41 Ford spindles. Its go-power comes from a '49 Olds engine with '56 heads and six carbs.









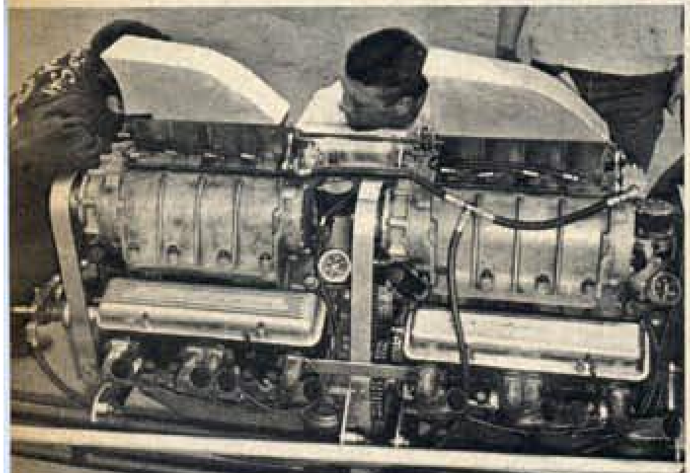
DRAGSTER
1. FRAME Revell's "Mooneyes" Drag Frame
2. M & H RACEMASTER SLICKS Revell's Competition Tire Kit
3. MAG WHEELS Revell's Competition Wheel Kit
4. HEADERS Revell's Sting Ray V-8 Kit
5. ENGINE Closest model is Revell's Cadillac V-8 Kit, on engine from Roths Outlaw
6. FRONT TIRES Pirellis from Revell's Competition Tire Kit
7. MAG WHEELS AMT Dragster Kit
8. FRONT AXLE AMT Dragster Kit or Revell's Dragster Chrome Parts Kit

ROADSTER
1. BODY AND FRAME AMT 29 Ford Roadster Body with rear deck cut off and filled in with sheet plastic. AMT 29 Ford Frame
2. PICKUP BED AMT 25 "T" Kit or Revell's '23 "T" Body Kit
3. WINDSHIELD AMT 29 Ford Kit
4. GRILLE SHELL AMT '25 "T" Kit or Revell's '23 "T" Body Kit

5-6 & 7. FRONT AXLE, WHEELS AND TIRES from Revell's Outlaw Kit

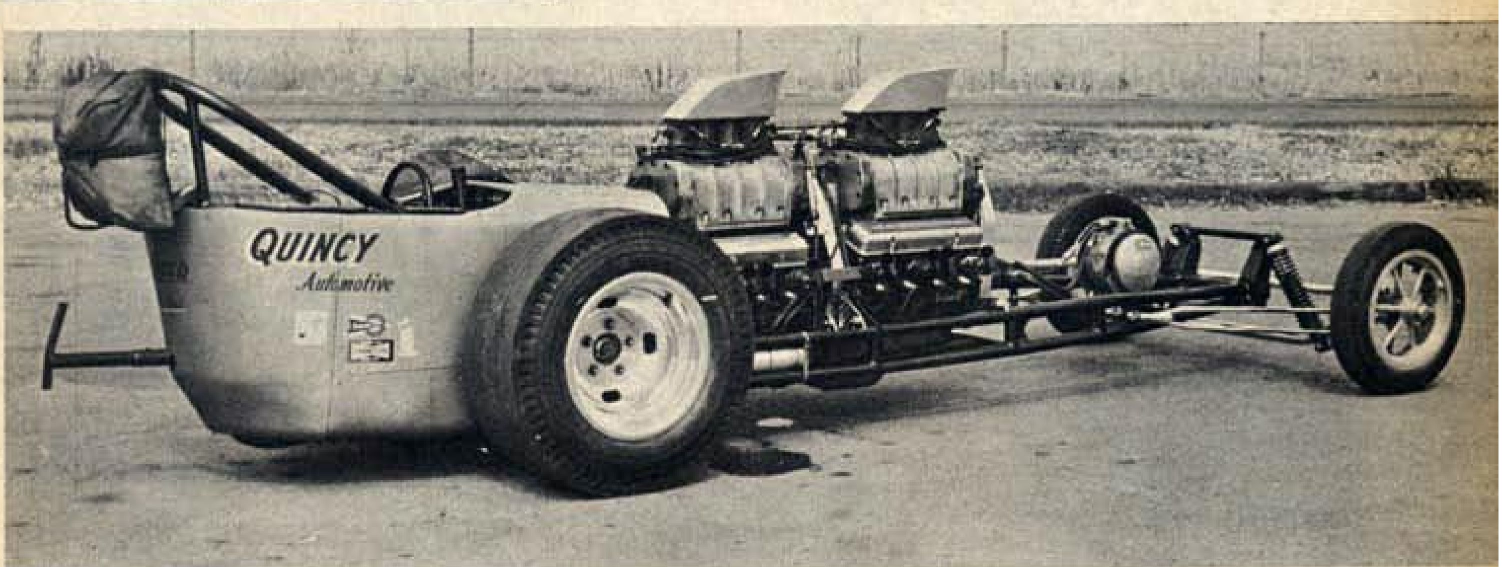
8. ENGINE Roth's Outlaw, or Revell's Cadillac V-8 is closest
9. HEADERS Roth's Outlaw Kit

Both cars painted bright red with black engines.

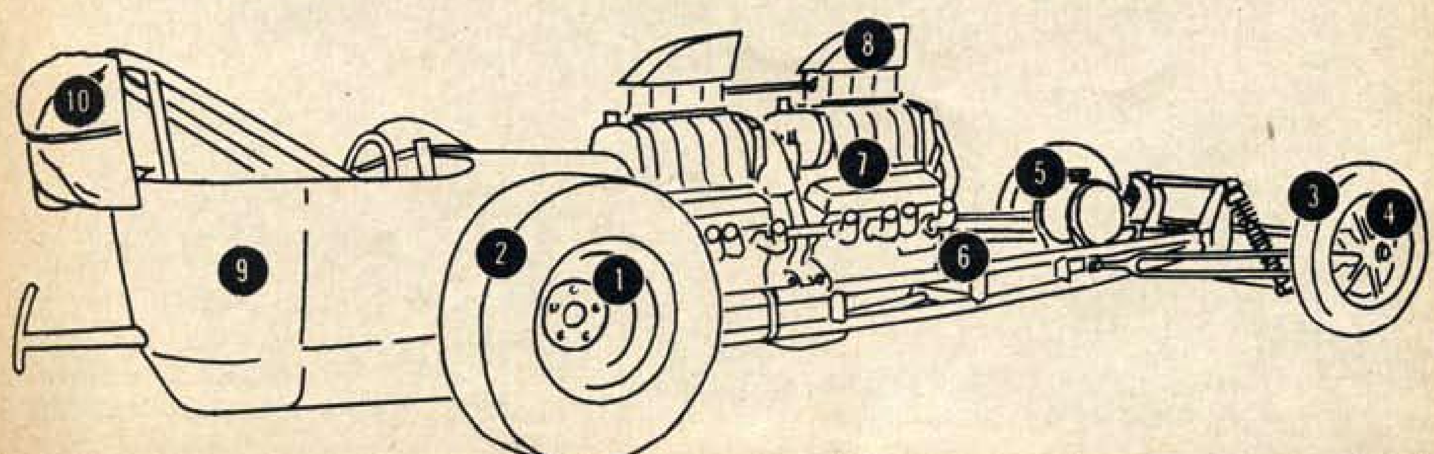


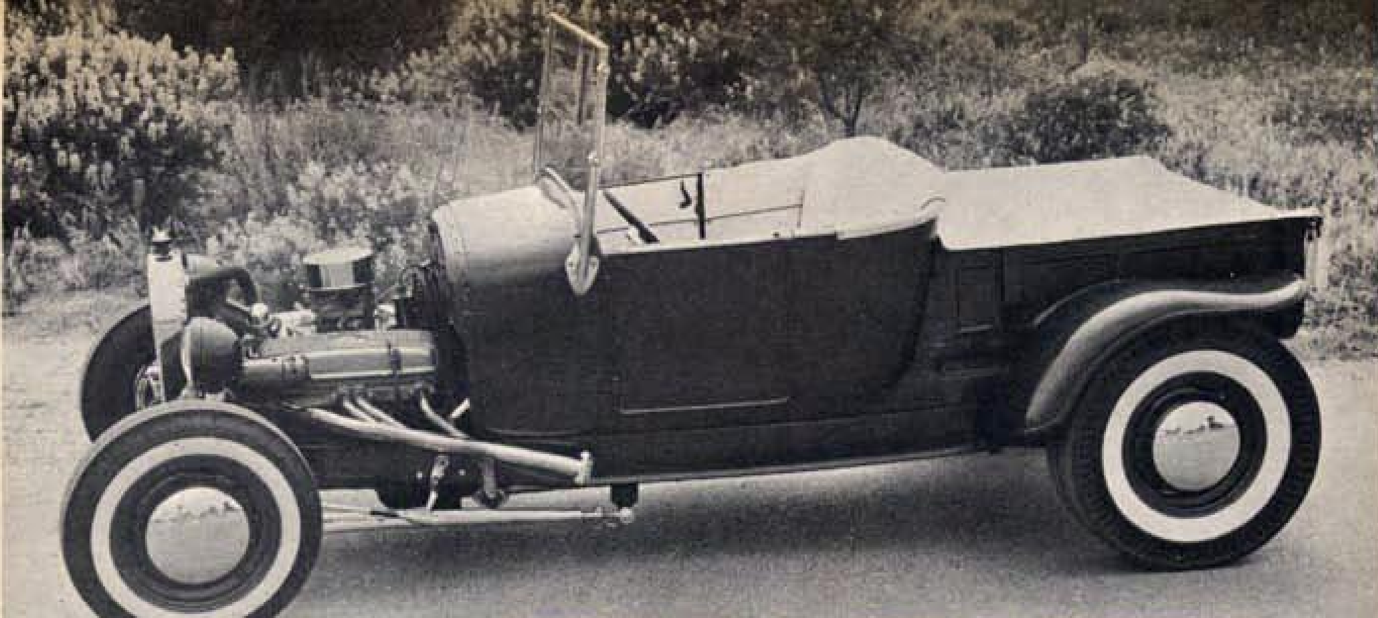
DOUBLE POWER

Installing a pair of engines in this dragster should challenge any model builder's ingenuity. The matched powerplants in this 184-mph rail are 383-inch Chevy V-8's carrying GMC blowers and Hilborn fuel injection, topped with identical tapered air scoops. The real thing, at home at Quincy Automotive, Santa Monica, is a great example of fine workmanship. The body is fully enclosed around the driver, there is a parachute directly behind his head, and a tiny, sharply sloped windshield deflects the highspeed slipstream. Front suspension, with its unusual coil springs and shock absorber units, will add a distinctive and novel touch to the finished model.

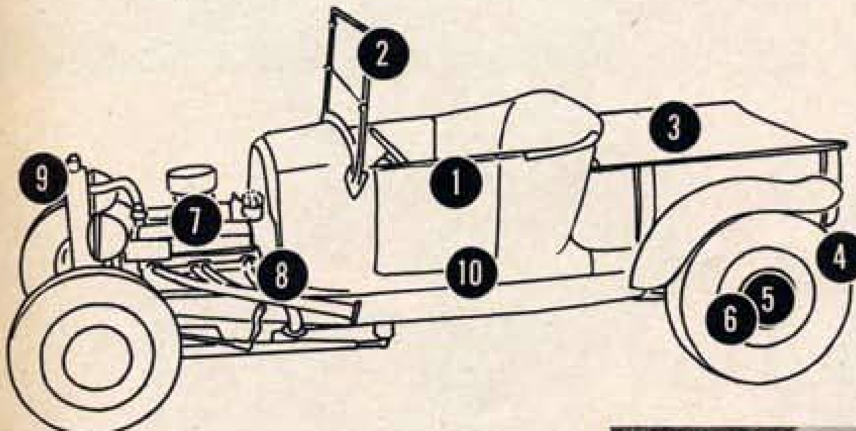


1. MAG WHEELS Revell's "Showboat" — Tommy Ivo's 4 engined dragster
2. SLICKS Revell's Competition Tire Kit
3. FRONT TIRES Pirellis from Revell's Competition Tire Kit
4. FRONT MAG WHEELS AMT's Dragster Kit
5. FUEL TANK Revell's Roadster Chassis Speed Equipment Kit
6. FRAME Modified AMT Dragster Frame
7. ENGINES AMT Dragster Kit
8. AIR SCOOPS AMT Dragster Kit
9. BODY Scratch Build from scrap plastic and body putty
10. DRAG CHUTE AMT's Dragster Kit





SHOW STOPPER



A rodder's classic, this '27 T will equal a classic model if built with the same care and precision as the real thing which has collected 19 trophies in 21 shows. Painted a glowing Tahitian red, it features a '29 Ford pick-up bed complete with neatly fitted tarp, pleated white interior, and whitewall tires – grooved slicks on the back. The cockpit carries a full line of instruments – tach, speedo, pressure and vacuum gauges, while the floor shift moves a '39 Ford trans. Frame and suspension are '32 Ford with a '40 Ford rear axle unit. Wheels and hydraulic brakes are '50 Merc. The engine is a '56 Corvette with short chromed headers and a single four-barrel carb. Rear fenders flare upwards at the back.

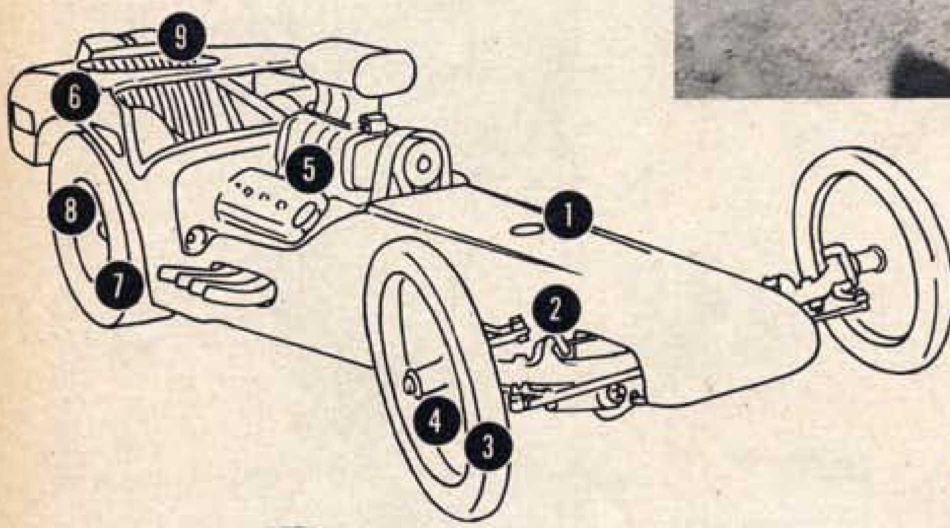
1. BODY AMT'S 25 "T" Body on Revell's '23 "T" Body kit
2. WINDSHIELD Monogram's Black Widow Kit
3. PICKUP BED AMT's 25 "T" Kit
4. WHITEWALL SLICKS Revell's Whitewall Drag Slicks
5. WHEELS AMT on Revell Wheels
6. BUTTON HUB CAPS AMT 40 Ford Kit
7. CHEVY V-8 Revell's '57 Chevy 283 Engine Kit
8. EXHAUST HEADERS Monogram's 30 Ford
9. RADIATOR SHELL AMT's 25 "T" on Revell's '23 "T" Body Kit
10. FRAME AMT's '32 Ford Kit



Weird One

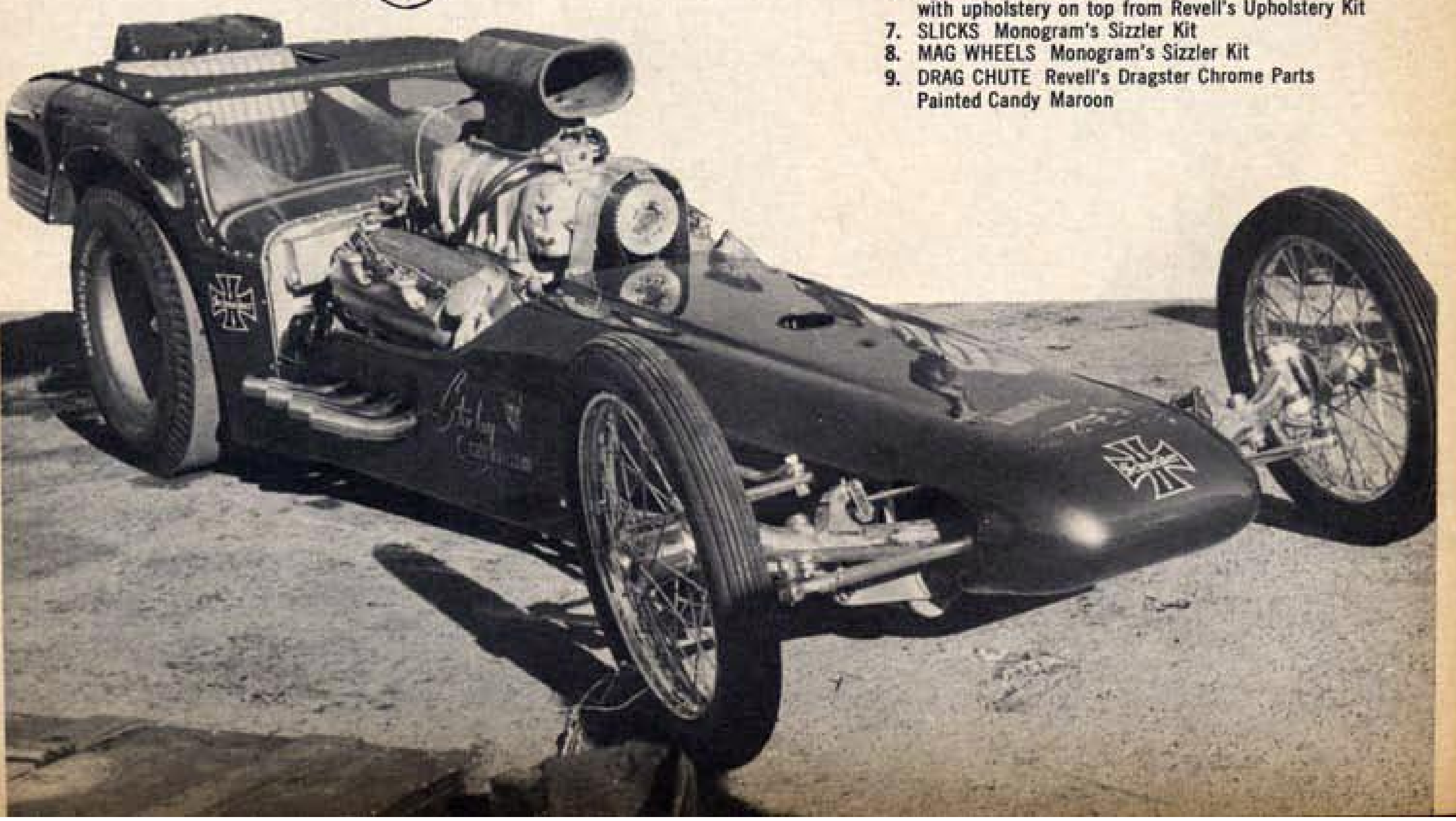


For a far-out model, try this Class A competition coupe. The car belongs to Bill Traylor of Wichita, Kansas, who built the power train, chassis and running gear in his own speed shop. The nose section of the body is aluminum, while the cockpit is a Bantam that has been chopped 11 inches, fitted with a huge over-the-top windshield, and an open canvas cover where the roof was. Color is a sparkling candy tangerine. Punch for the 175-mph speed, 8.70 ET comes from a 400-inch Chrysler, GMC-blown, Hilborn-injected, running on fuel. Wheelbase of this dragster in coupe clothing is 104 inches. The model builder should take careful note of how the body has been cut away at the rear to extend over the slicks.



FRAME Monogram's Sizzler Dragster Kit

1. BODY FRONT made of parts from Monogram's Sizzler Dragster Kit
2. FRONT AXLE Revell's Outlaw Kit
3. FRONT TIRES Revell's Competition Tire Kit
4. FRONT WHEELS Revell's Competition Wheel Kit
5. BLOWN CHRYSLER Monogram's Sizzler Dragster
6. BANTAM BODY Monogram's Sizzler Dragster Kit with upholstery on top from Revell's Upholstery Kit
7. SLICKS Monogram's Sizzler Kit
8. MAG WHEELS Monogram's Sizzler Kit
9. DRAG CHUTE Revell's Dragster Chrome Parts Painted Candy Maroon

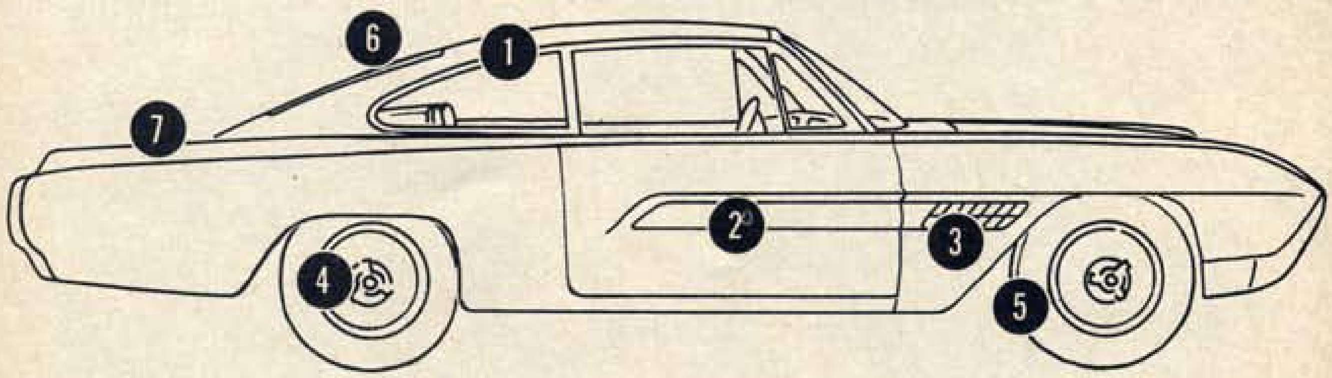


ITALIEN

A graceful fastback sweeping far aft, special vented side trim and wire wheels mark the Italien, a natural for any modeler's collection of custom Thunderbirds. Interior space is the same as with a stock 'Bird as is the trunk compartment, although the deck lid has been shortened to permit the new roof line to extend toward the tail. The sharp model builder should be able to dream up at least a dozen more custom touches for the popular T-bird, coming up with his own personalized version of Ford's highly styled personal car.







BODY AMT '63 Thunderbird

1. TOP Reconstructed '61 Plymouth top from a Johan kit. The sweeping curve can be built up with body putty.
2. SIDE TRIM is the chrome paper from Revell's upholstery kit, scribed lightly with a sharp blade.
3. OPENINGS are cut with a small drill and then filed square
4. WIRE WHEELS Revell's custom wheel kit
5. TIRES AMT T-Bird kit
6. REAR WINDOW is cut from the large bubble included with AMT's '63 T-Bird kit
7. REAR DECK is made from scrap plastic and filled with body putty

Color is Candy Apple Red

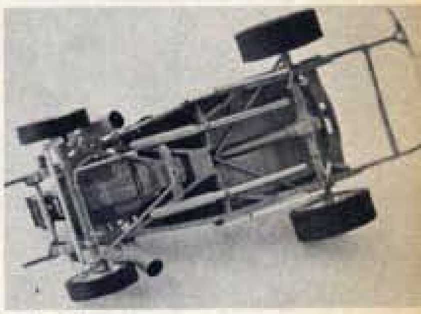
MODEL MASTERS

GREAT EXAMPLES OF CUSTOM BUILDING

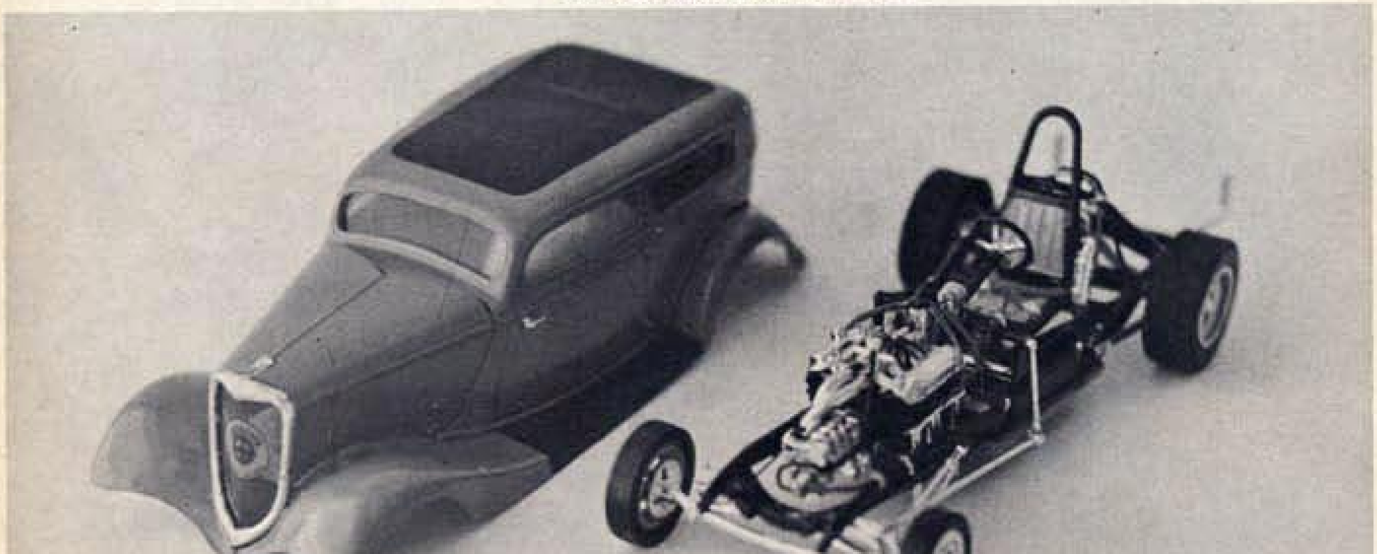
All of the how-to-do-it stories in the world don't inspire model builders half as much as actually seeing top examples created by show-winning builders. Here is such a group. You will recognize some of them as the stars of this month's cover. They're colorful customs and hot rods that catch the eye and yet do not stray too far from the real thing in their attention to details. In each case the builders have done a clever bit of piecing together components from a great number of kits from just about every manufacturer in the field.



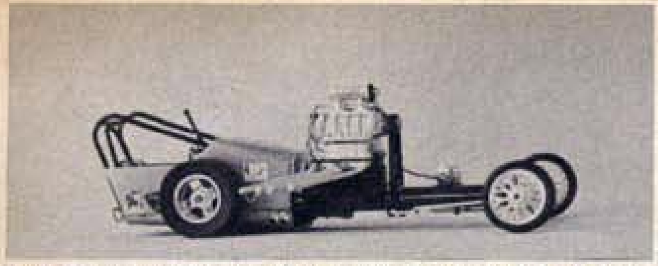




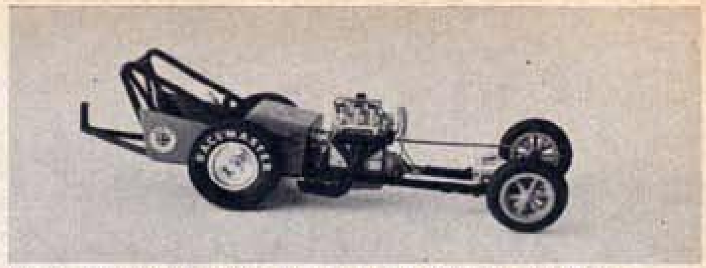
Jim Jenkins, '41 Willys competition coupe started out as an AMT '40 Ford. 2½ tubes of body putty handled the conversion. Engine is an AMT Chevy, tires and wheels are Revell, seats are from Mercedes 190SL.



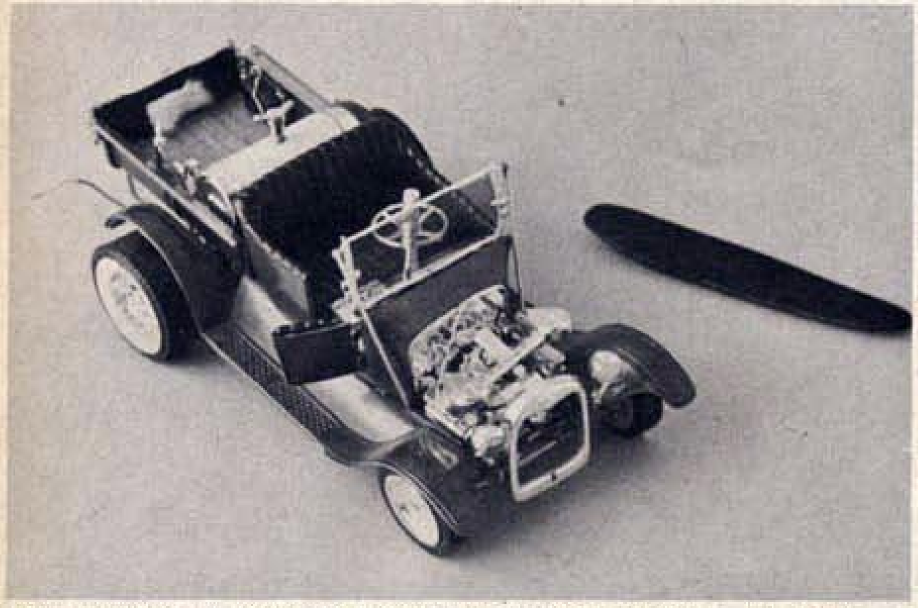
'34 FORD COUPE BODY WAS JOINED AT REAR BY BANTAM BODY FROM MONOGRAM SIZZLER KIT TO MAKE THIS FORD SEDAN.



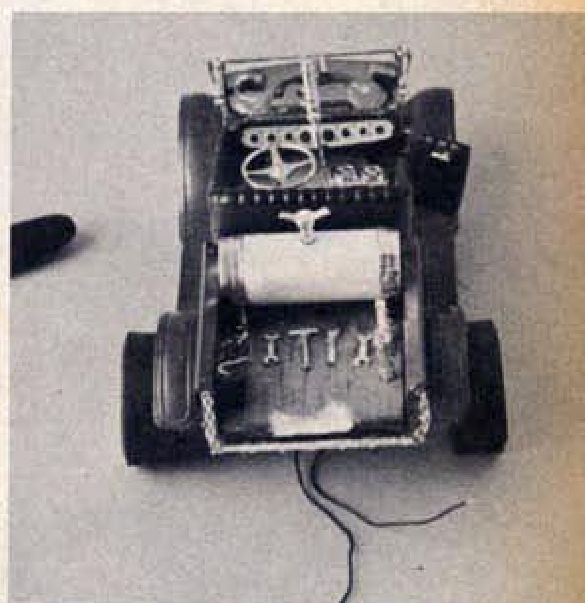
Bob Wagner's "Limefire" dragster is powered by a blown Chevy engine, has complete wiring detail. Note the very authentic chained balls used as covers for the exhaust pipes.



Here's another dragster but it has a unique powerplant, the four-cylinder unit from the Monogram '30 Ford kit. Builder Jim Jenkins used frame and body from the AMT dragster kit.



DON LENAKER'S "T" ROADSTER PICK-UP HAS A CORVAIR ENGINE UP FRONT.

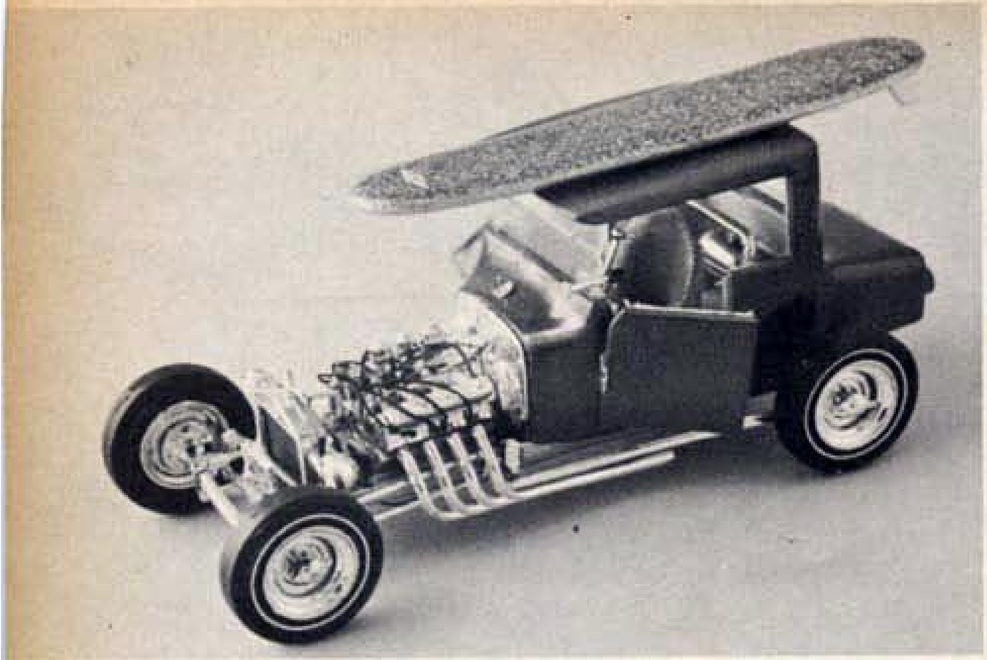


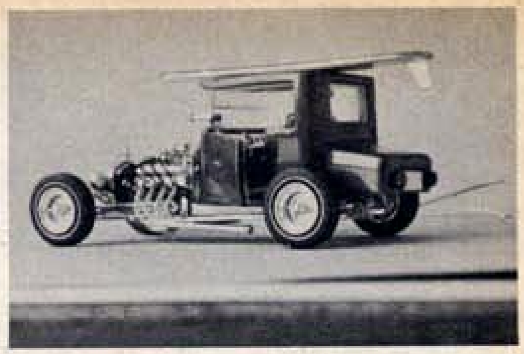
DOORS, TAILGATE AND LIGHTS ALL WORK.





JIM JENKINS' CLASSIC "A" ROADSTER HAS A '57 CHRYSLER ENGINE FROM AMT'S BUICK SPECIAL KIT. FRAME IS ALA KART.





This "Surfer's T" coupe by Bob Wagner won first place at the NHRA Winternationals. Its cantilevered top, opening doors, swivel seat, working foot pedal, under-dash wiring and working lights make it a stand-out. Paint is 30 coats of candy wild cherry over pearl base.



A Volkswagen body shell sits on the powerful dragster of Don Lenaker. There are two supercharged Pontiac engines. The candy purple car is complete to the point of a drag chute.





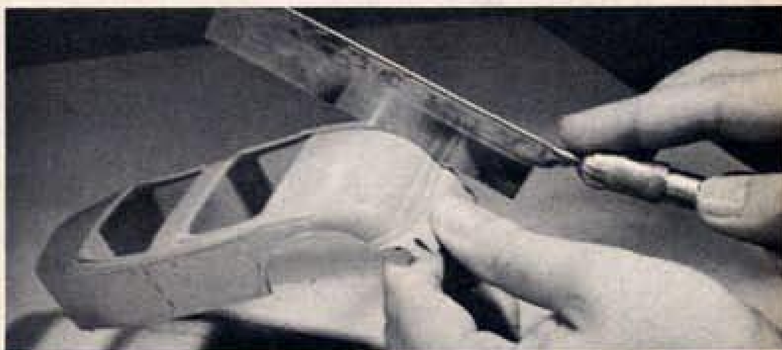


Marv Meyer's candy tangerine roadster pick-up is a neat street rod with a powerplant that catches attention because of its Chrysler ram-inducted manifold. There are mag spoke front wheels and custom taillights.

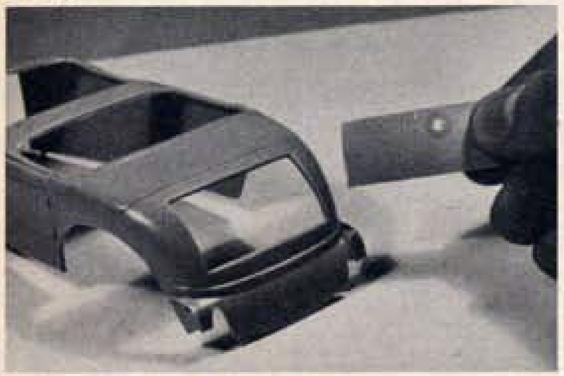
Hinge THAT TRUNK LID



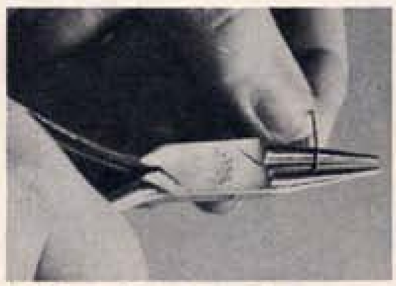
Monogram's popular version of the classic 1934 Duesenberg is a car that calls for fine attention to detail by the real enthusiast. Such an added touch is the addition of an operating trunk lid, explained in detail here by Monogram engineer Roger Harney.



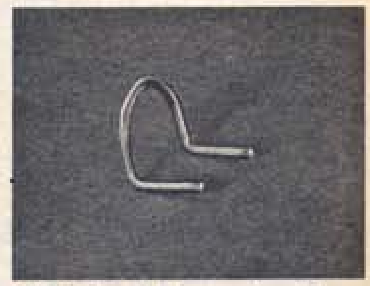
1. With your razor saw, carefully cut the trunk lid. When you come to the corners switch over to the more adaptable jeweler's saw.



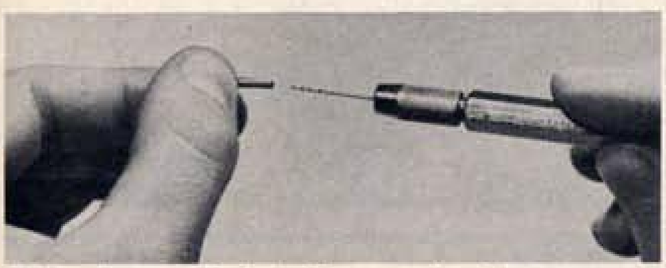
2. File the edges of both the trunk lid and its opening very smooth and set them aside for awhile.



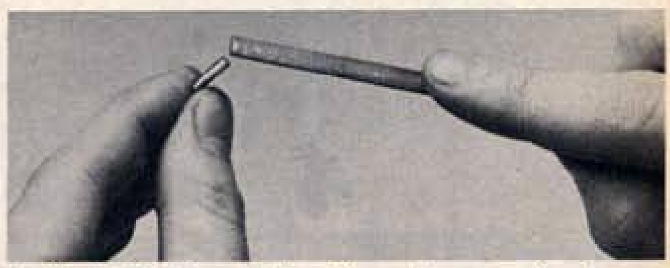
3. Use ordinary straight pins for the pins for the hinges. Bend with long nose pliers.



4. Finished hinges should measure 7/32" high x 9/32" wide x 3/16" long.



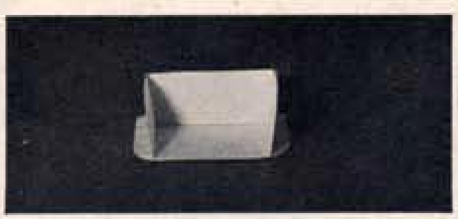
5. Cut four round, ⅛-inch long sections from scrap plastic. Drill a hole through center same size as hinge.



6. File inside hinge holders flat and cement. Trunk holders are then fitted, filed and glued over the hinges.



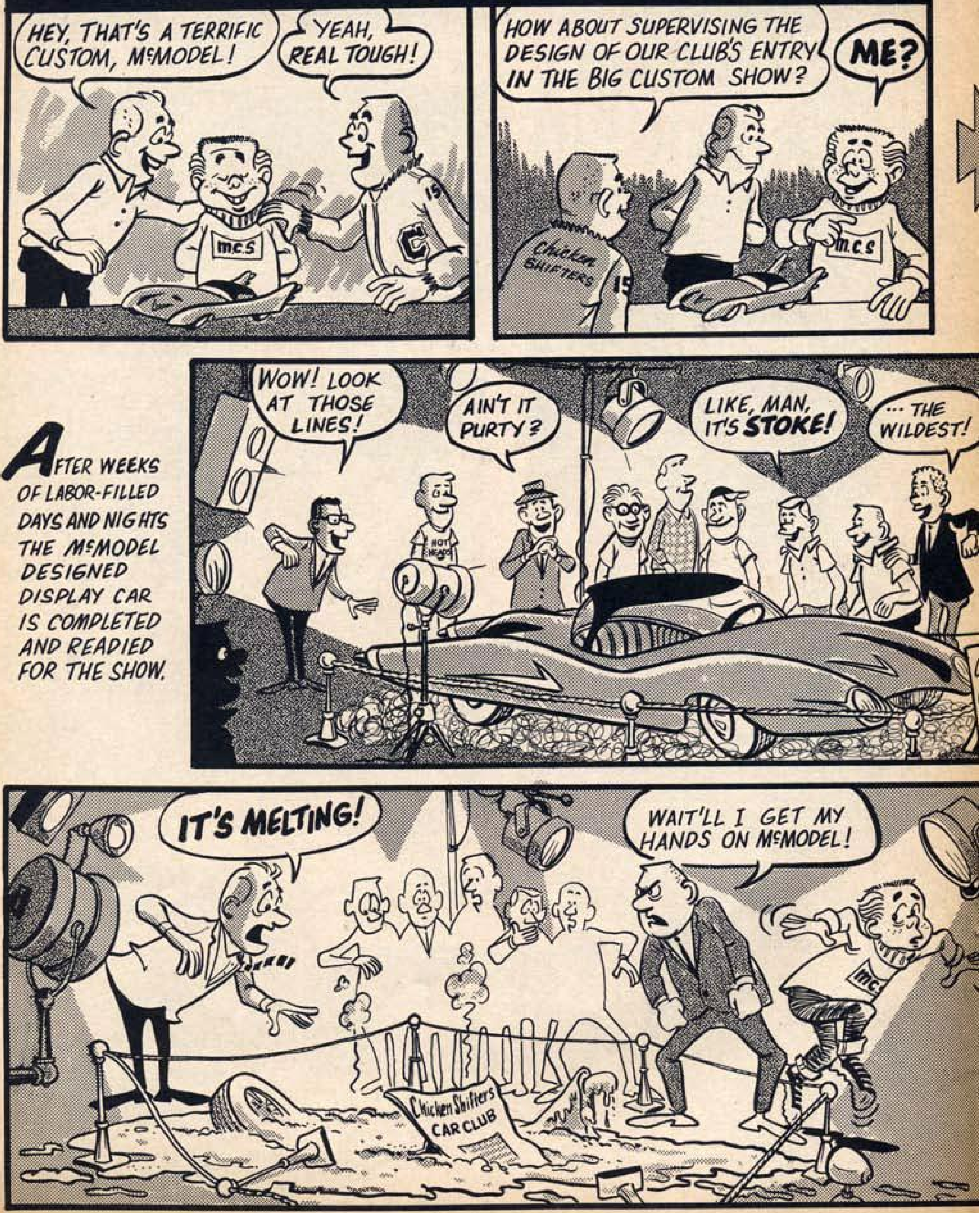
7. Install the hinges. The forward portion of the hinge does the pivoting while rear portion is cemented to lid.





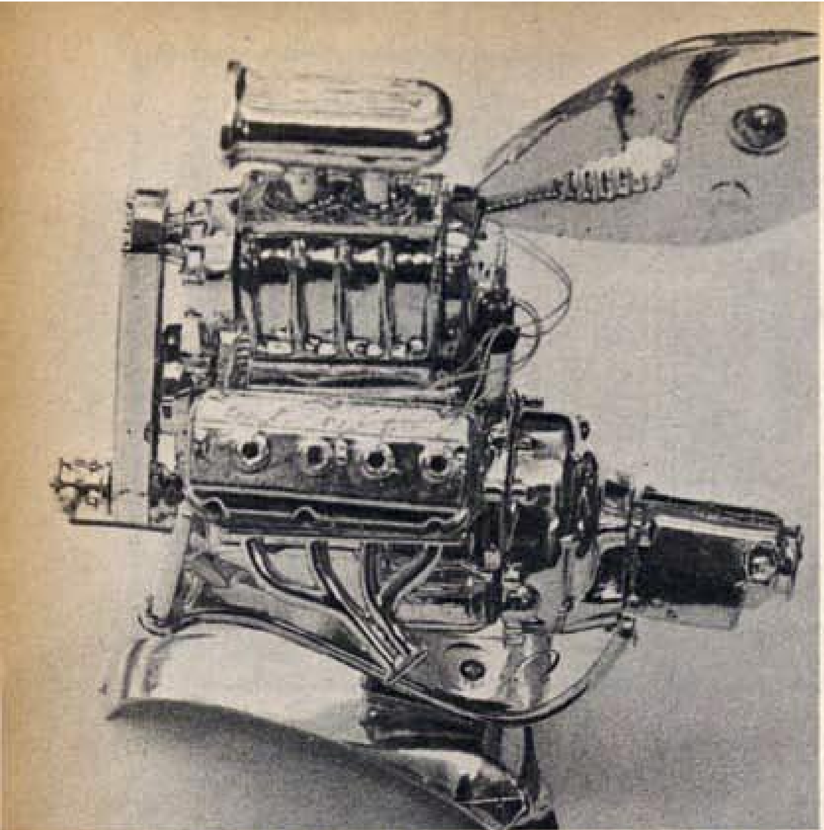
8 & 9. For a further realistic touch, you can add a luggage compartment made from colored cardboard. Match the size so that it will fit the contour of the inside compartment. Cement the finished unit to the fender assembly.

McMODEL the MASTER BUILDER

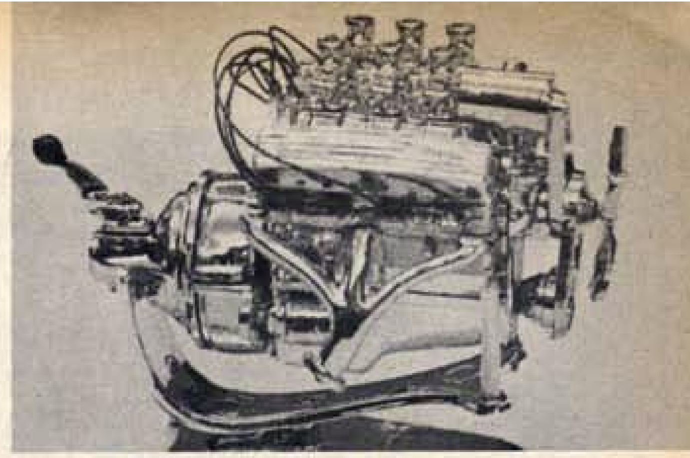




EASY ON THE POLISH!
VERY GOOD PAINT-JOB, TOO-LOOSE!
OH, BEAUTIFUL! WE'VE GOT A REAL WINNER!
Director
Chicken Shifts CAR CLUB
LOOK!
OUR BEE-UTIFUL DISPLAY CAR !!
OH NO! THIS COULDN'T BE HAPPENING TO US!
I WAS SORTA SUSPICIOUS WHEN HE INSISTED ON A PLASTIC CHASSIS...
... AN' A PLASTIC MILL ...
... AND PLASTIC BODY!!
McMODEL SALUTES...
The ROAD RUNNERS MODEL CAR CLUB of PASADENA, CALIF.
and
The CUSTOMIZERS MODEL CLUB NEEDHAM, MASS.
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Register your Club with McMODEL today

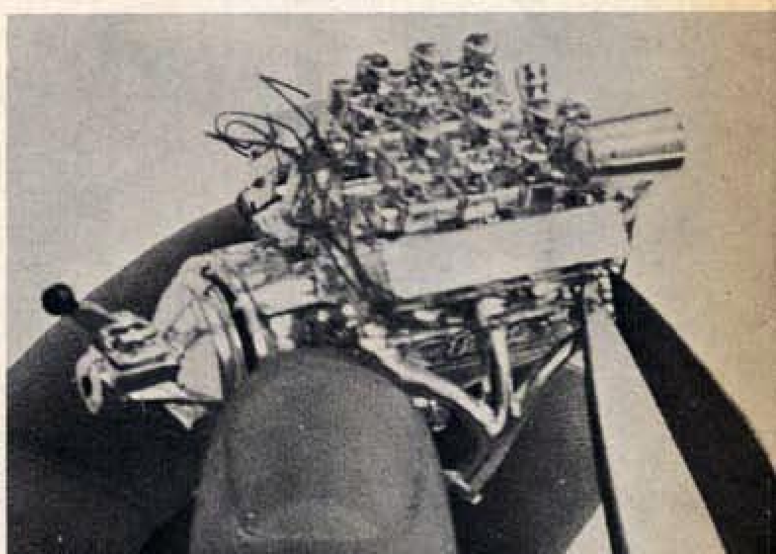


A blown '58 Chrysler V-8 engine is super detailed by having wire fuel lines put into place. It has a GM blower, LaSalle gear box and Hedman headers. It sits on Revell's Display Stand.

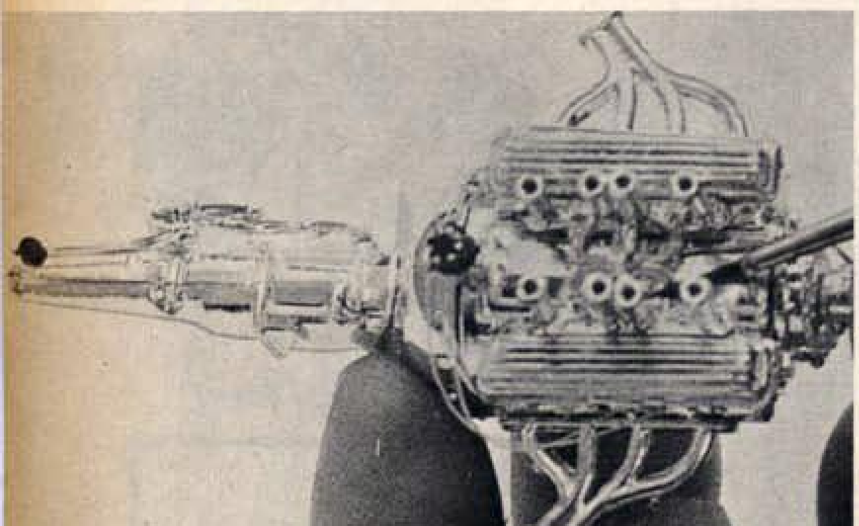


Completely chromed Cadillac V-8 in 1/25th scale. It has six Stromberg "97" carburetors, a CAE "in and out" box, a Cyclone "Shift Master", Edelbrock intake manifold.

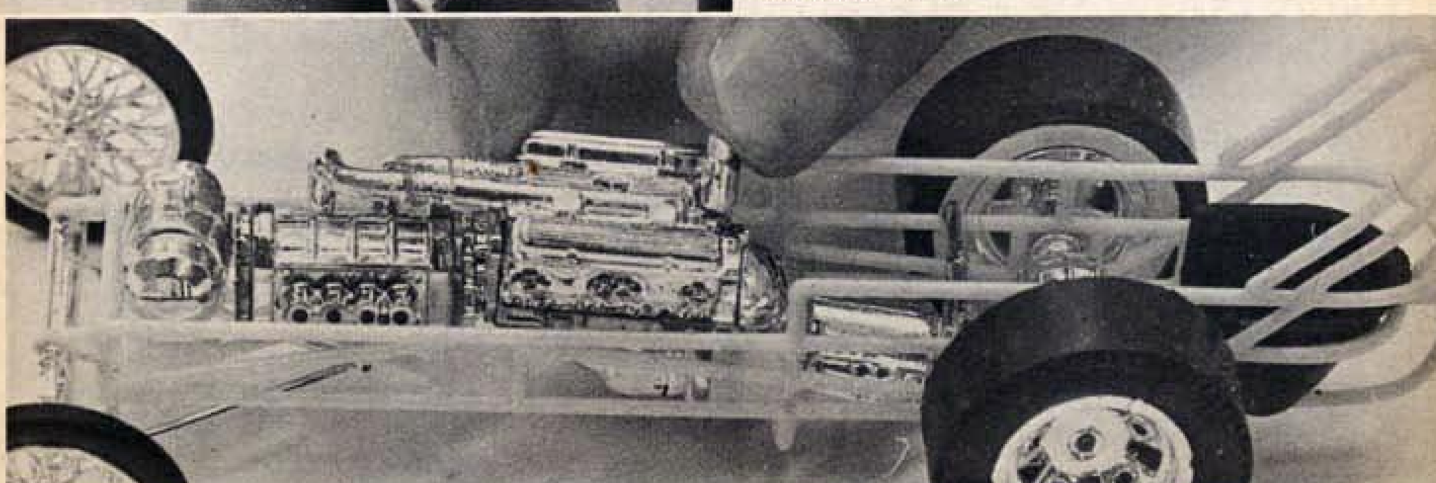
CUSTOM



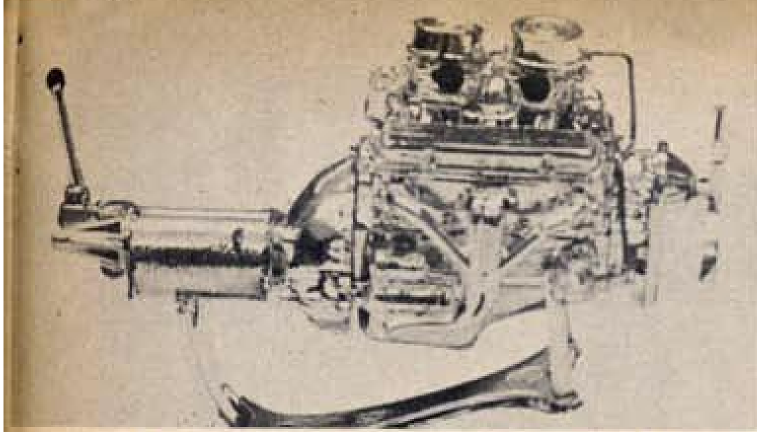
Connecting the ignition wires to the Cadillac V-8. Plastic covered fishing line is used. It is durable, quite easy to work with and shows up very well.



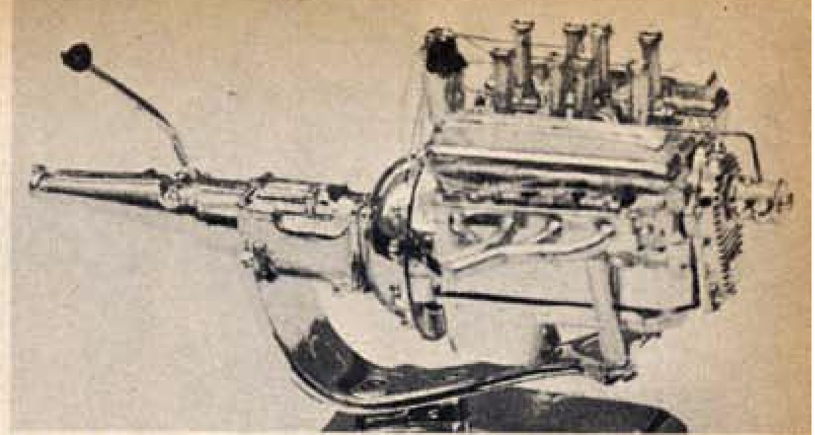
Final touch to this 1960 Buick V-8 engine is added with the painting of hose detail. This 1/25th scale powerplant has Hilborn fuel injection, Moon timing gear case, Scintilla mag.



283-CUBIC-INCH CHEVY ENGINE WITH A GM 6-71 BLOWER IS DROPPED INTO PLACE ON THE "MOONEYES" DRAGSTER FRAME.



A potent looking speed producer is this big V-8 from the 1957 Chevrolet. Manifold is Edelbrock dual-quad.



Holding the fuel injection unit is right way to mount '63 Sting Ray V-8 engine on this tubular roadster frame.

POWERPLANTS

Show Winning Model Builders Pay As Much Attention To The Engine Details As The Body Shell

A car, full size or model, is only a shell without its power plant, that's why model builders are now going for engines as much as body styling. Whether you're customizing a kit or building from scratch, separate engines are now available in 1/25th scale that experts flip over. There are bombs for stockers, show machines, competition, dragsters and rods.

Here's a list of some of the ones you'll find in Revell's Custom Car Parts Show. They're all chrome plated – ready for your engine collection or for that last trophy-winning touch to your customizing job. There's a bomb of a '57 Chevy V-8, a tough '58 Chrysler V-8, a hot '60 Buick V-8, a rugged Cad V-8, a sharp Pontiac V-8 and a boss '63 Corvette Stingray, as well as an experimental turbine engine for your futuristic "dream" model.

These engine kits, loaded with "goodies," include most famous name speed equipment parts in 1/25th scale. You can use these parts not only with Revell's engines, but also with any 1/25th scale engine that comes in a car kit, such as AMT, Jo Han, etc. Revell's list is like shopping in a real speed equipment shop. There are Stromberg "97" carbs, Cragar, Edelbrock and Weiand manifolds, CAE "in and out" box, Cyclone Shift Master, GMC and Cragar blowers – and stuff from Ansen, Hedman, Grant, Moon, Potvin, Iskenderian, Hilborn and other record-breaking labels.

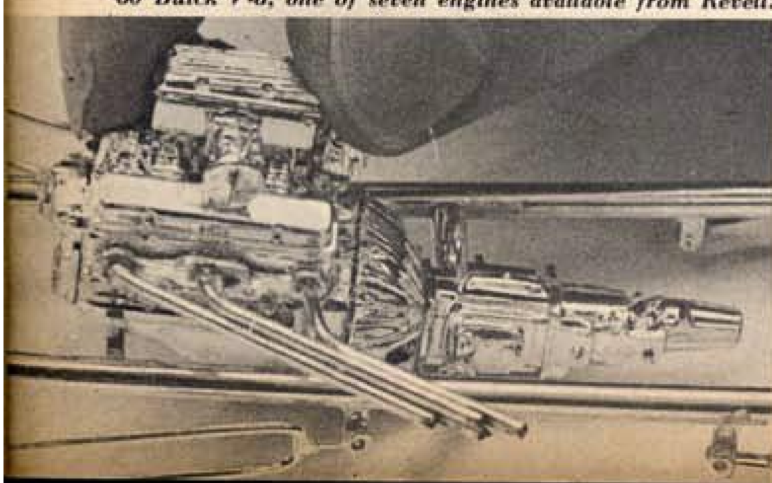
Select your engine for a model as if for a full size machine. For instance, drop the '63 Stingray power plant into a stocker and you're on the way to having a model of a top eliminator competition wagon.

Revamping or souping up a model engine should be handled as if it were a full size real one. For example: To increase its power you have to increase the volume and flow of the air-fuel mixture that'll be pumping into the engine; so on go fuel injectors. This heavier and faster flow means you'll need extra carburetion. Edelbrock's manifold, for instance, with its eight carbs, will do the trick. You'll need increased atmospheric pressure to force the fast moving air-gas mixture into the combustion chambers; so that calls for a blower to do this supercharging job. With all this power, a stock cam won't do, so a high speed cam, like an Iskenderian, should go on.

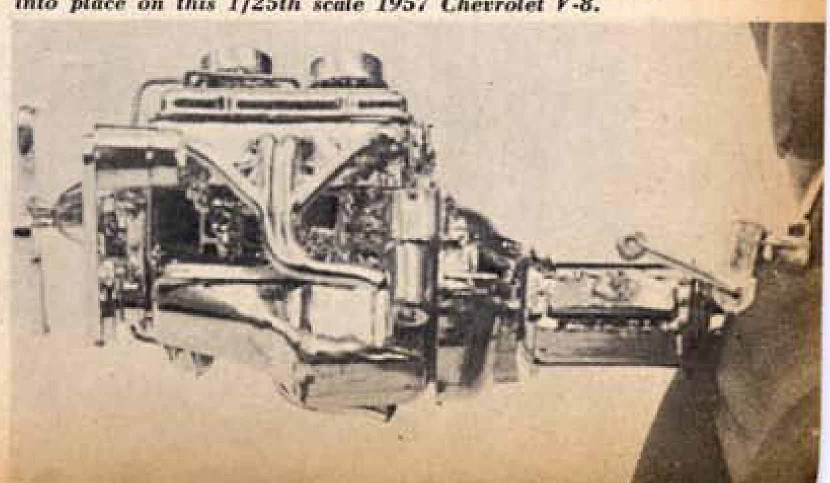
This engine, if real, would run blazing hot; so to cool it, install a finned valve cover, the multiple fins giving additional cooling surfaces, plus a boss look that's worth extra points in any contest. Now install headers instead of the stock exhaust pipes to get rid of the gases as fast as possible.

There are plenty of other ways of souping up an engine, and to do it right is fun. A good idea is to pick up any of the big car magazines, such as Popular Hot Rodding, and see if you can figure out how to use your Revell custom engine and speed equipment parts to make your model power plant exactly like the real ones described.

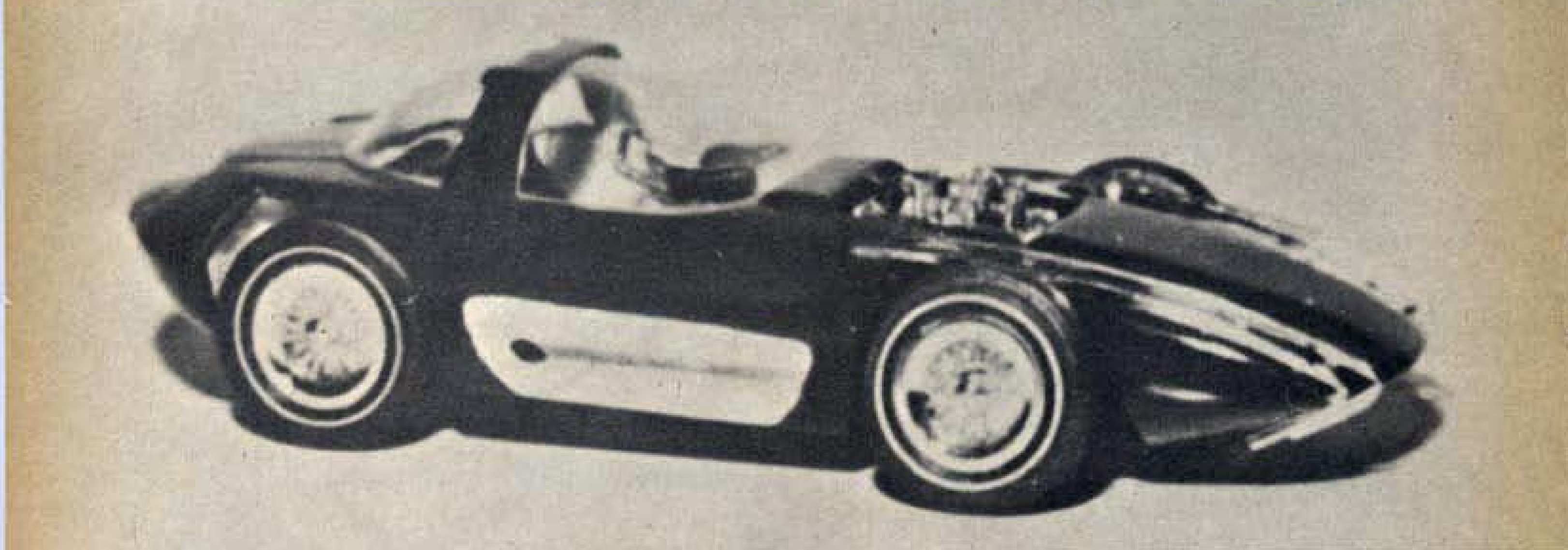
A four-speed transmission meters out the power for this '60 Buick V-8, one of seven engines available from Revell.



Shift linkage on a B&M Hydro transmission being cemented into place on this 1/25th scale 1957 Chevrolet V-8.



MCS Contest Winners

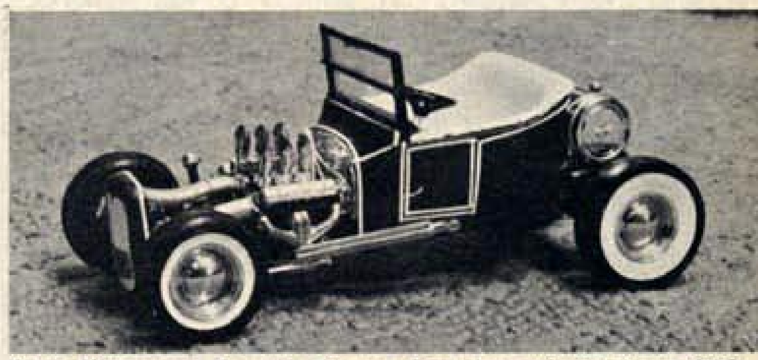


First Prize and $25 to Darrell Hunger of Oakland, Calif. for his replica of the "Silhouette." It's a '62 Corvette with a '62 Jag front end; a real show winner.

ANOTHER GROUP OF



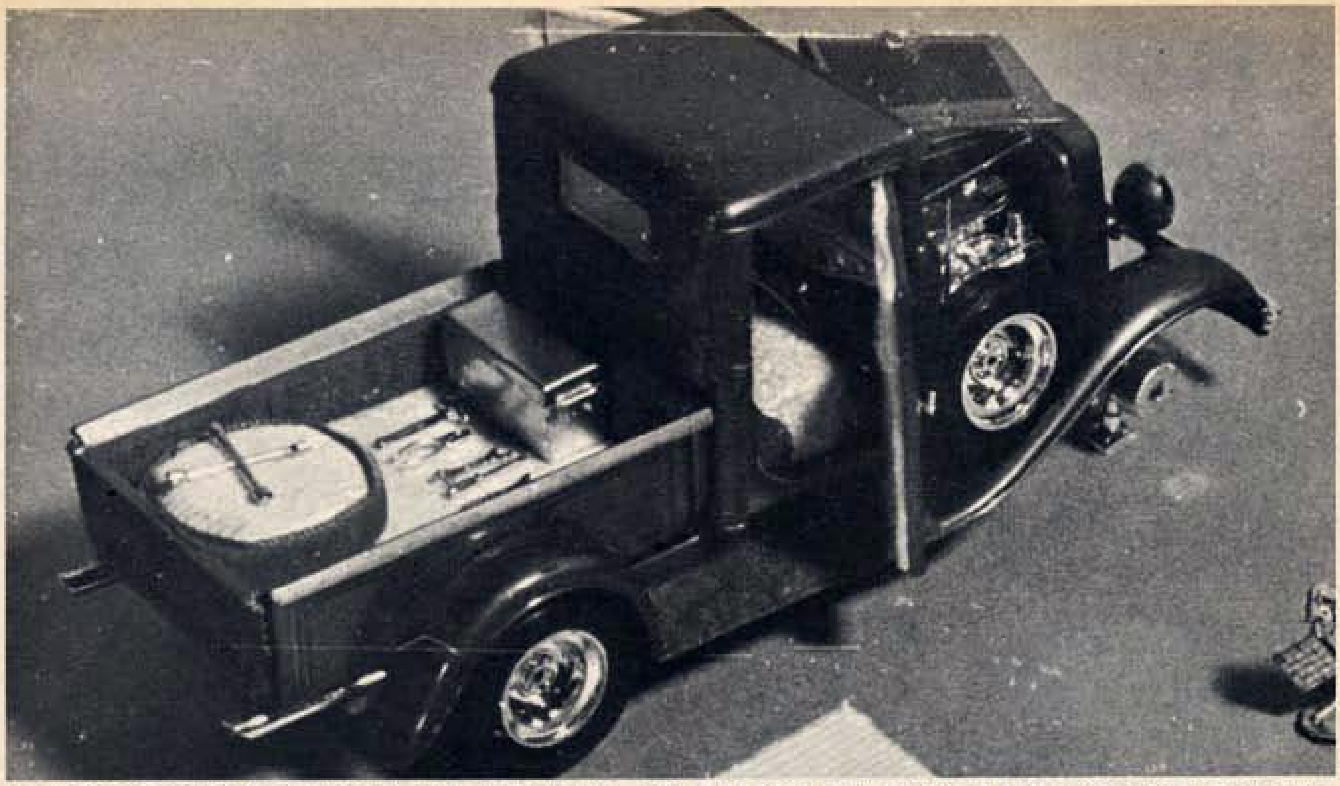
Marine Sgt. Jimmie Hasting wins second prize with his chopped-top, front-engined Corvair. All runners up get 12 issue subscriptions to MCS.



From Vancouver, Canada, Frances Lum has submitted our fifth position winner. It's a '25 T with quick-change rear end, chrome dash. Gas tank and wheel wells are from Ala Kart.



FOR THIRD PLACE, RALPH HIBBARD SENDS HIS CAREFULLY DETAILED RACING CORVAIR FORM TONAWANDA, N.Y.



SIXTH SPOT GOES TO RICK HODGES, DEER PARK, WASH., FOR A '34 FORD AMT TRUCK. IT HAS WORKING HEADLIGHTS.

PRIZE CARS FROM OUR READERS



John Wechsler of Allentown, Pa. takes fourth spot with his highly modified '49 Ford. It is fully upholstered, painted with blue-gold 'flake.



David Georgeff of New Hamburg, Ont., shows off his model working skills with a '63 Thunderbird built as a semi-custom. Paint is a glistening candy purple with a gold underbase.

a MODEL CAR SCIENCE *Contest*

FOR MODELERS EVERYWHERE . . .

Each month the editors of MCS will select, from PHOTOS submitted, the top model car. It will be shown on these pages and its owner will receive a $25 PRIZE.

SEND A PHOTO OF YOUR PRIZE MODEL TODAY TO:



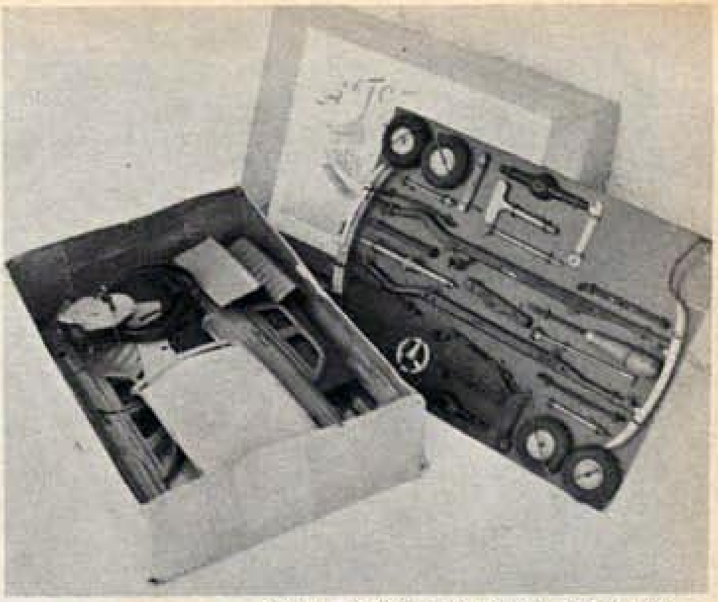
MODEL CAR SCIENCE
Contest Editor
171 So. Barrington Pl.
Los Angeles 49, Calif.

You may submit as many entries as you wish. Send photos only, please. NO KITS. Include your name, address, age and information on how you built the model. Only CAR models are eligible. We cannot return any photos submitted.

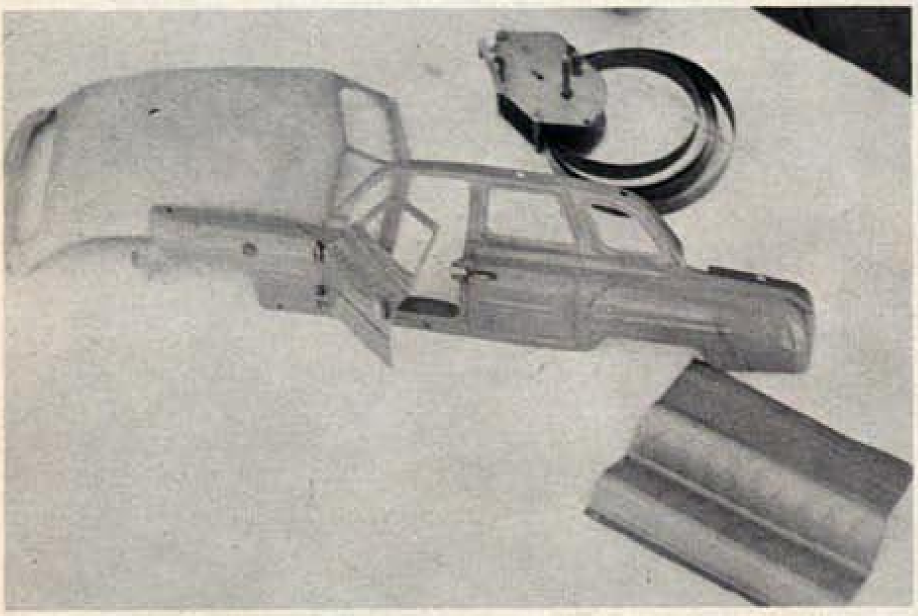
RUSSIAN CAR KIT

Here's How They Do It Behind The Iron Curtain

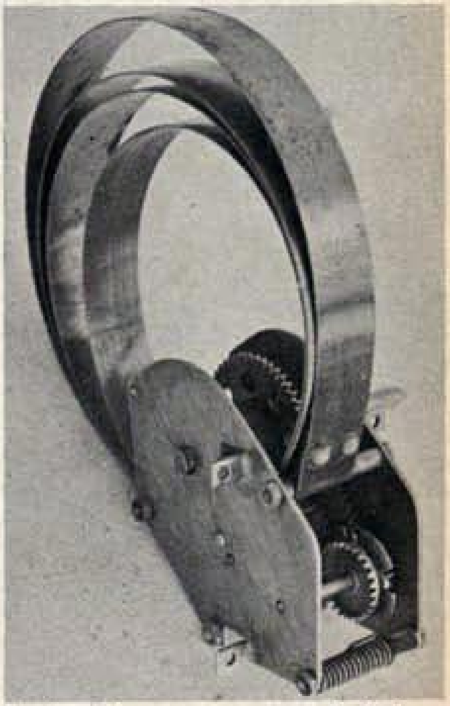
Even Russian youngsters have model kits, but look how different they are from ours. Shown is a model (scale unknown) of a popular Russian sedan, the Volga. The only trouble, from our point of view, is that it is entirely stamped from metal so that there is not the slightest possibility of doing any customizing. General quality and workmanship is crude, to say the least. Power is from a spring-type motor. A look at it gives us one more reason to be glad we live in America.



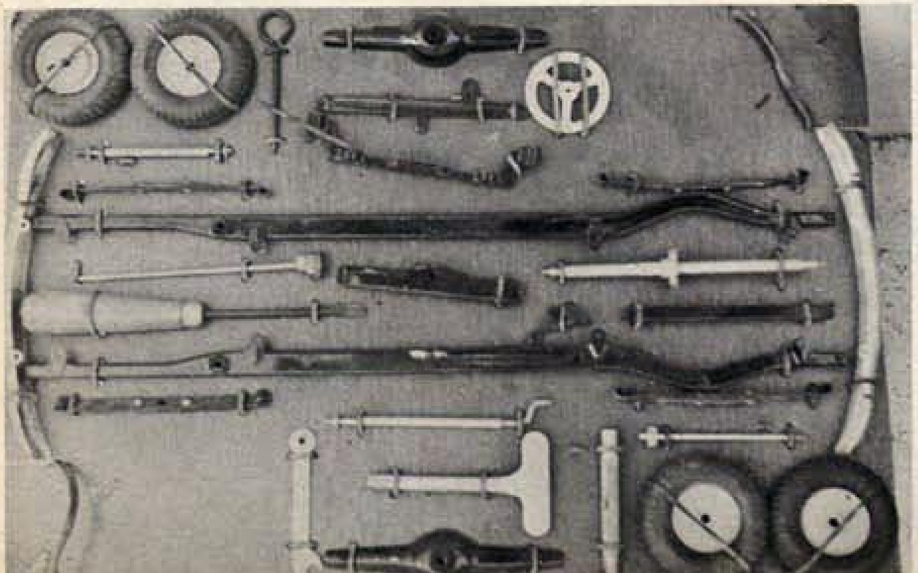
This Russian model kit, which was produced about 1957, is of the Volga, one of Russia's few passenger sedans.



Body of the scale Volga is all metal, features an opening left-hand door that rides on flimsy hinges. General quality is far below our cheapest models.



Spring-driven motor powers the Volga, but we fear that its performance would be match for good slot racer.



Components are all metal, include a complete set of tools for assembly. No prizes are offered for custom variations on this Iron Curtain monster.



All the pieces and accessories on the Volga are bolted together.

MAKE YOUR OWN SPARE PARTS

Casting Duplicates With Clear Plastic

Spare model parts can be formed quickly and simply with this low-cost technique. The basis is a clear liquid called Resolite which must be mixed in the proper proportions with its special catalyst and hardener. To make a part, press it carefully into ordinary modeling clay which then becomes the mold. Mix the Resolite in a paper cup with its other two ingredients, pour into the clay mold, and allow to air dry. In 30 minutes or so, the new part may be removed from the clay, ready to use. Resolite is available in most hobby or hardware stores.



Basic ingredients for casting extra model car parts include Resolite, catalyst and hardener and paper mixing cup.



To make a mold for the desired part, press it carefully into ordinary modeling clay, remove and mold is ready.



Following proportions included in kit, thoroughly mix Resolite, its catalyst and hardener in a paper cup.



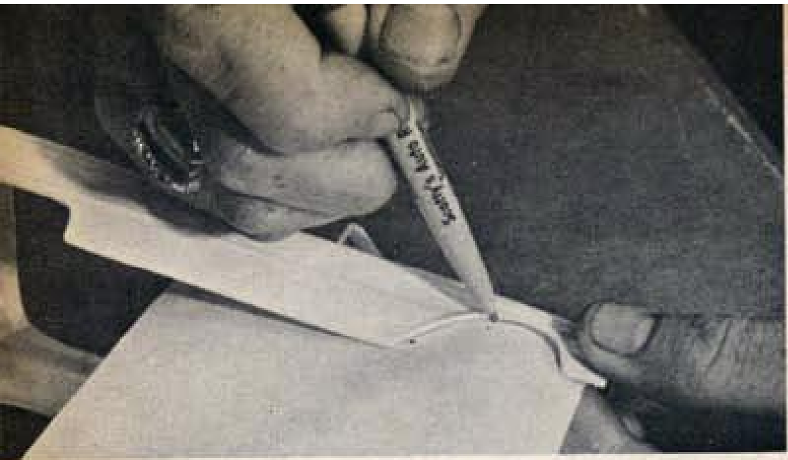
Pour the plastic mixture slowly into the center of the mold. Do not disturb until mass is solid, about 30 minutes.



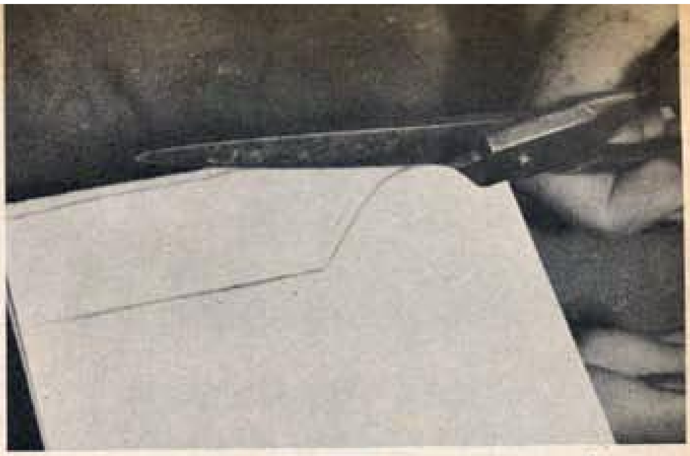
After Resolite has hardened, remove it from the modeling clay, sand and polish or paint as needed.



Finished parts will work as well as original, come in mighty handy for original customizing.



To duplicate the front wheel radius on the rear fenders, first trace the front well outline on a piece of paper.



Next step is to cut out the paper pattern, retaining the base line at the bottom of the car as a guide point.

RADIUSED REAR WHEEL WELLS

New Lines Add That Custom Touch

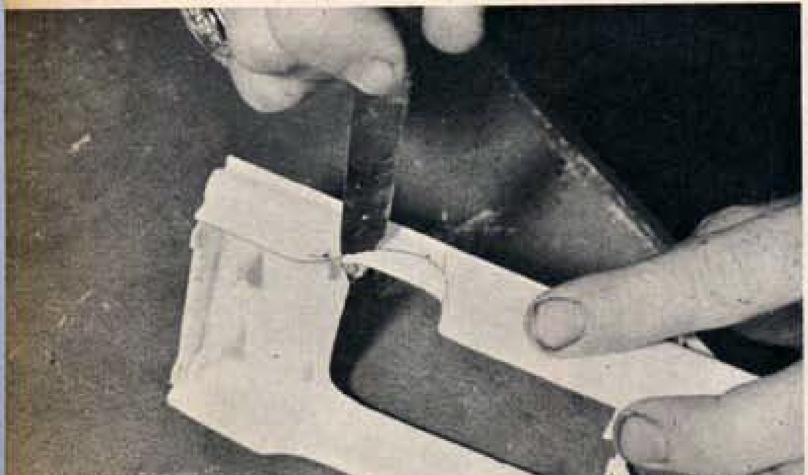
A distinctive custom idea for full-sized cars is matching the radius of the front wheel wells to the rear. Here is how to add the feature to any plastic kit, demonstrated by George Barris, styling consultant to AMT. It begins with tracing a paper pattern to the outline of the front wheel opening, cutting out the pattern and transferring it to the rear fender. Heat a sharp kitchen knife (shown is a butane burner, but a gas stove flame will do) and cut the outline. Keep the knife hot and clean it periodically with sandpaper. Finally, fill the radius smooth and finish it with 600 sandpaper.



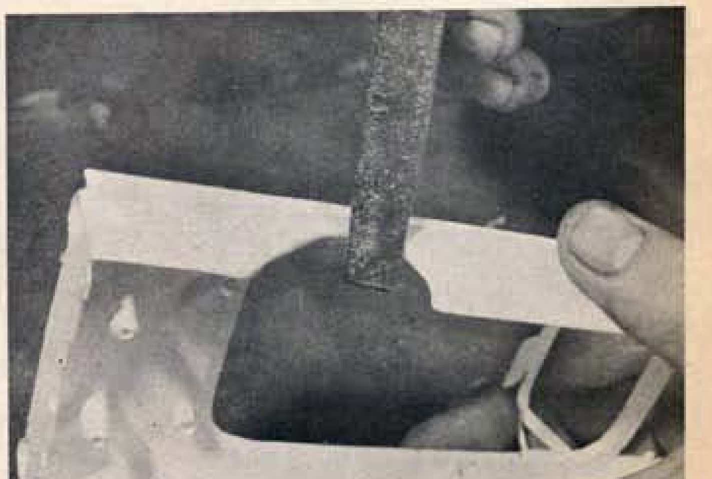
The new contour should be traced directly onto the rear wheel opening, using care to keep the curve even and well centered.



To cut the plastic, heat a kitchen knife over a butane flame or gas stove.



While cutting the new radius, keep the knife heated and periodically sand off the plastic that will stick to it.



After the radius is cut, file it smooth with a small file, then dress off rough spots with 600 grit sandpaper.

TABLE TOP RACING SECTION

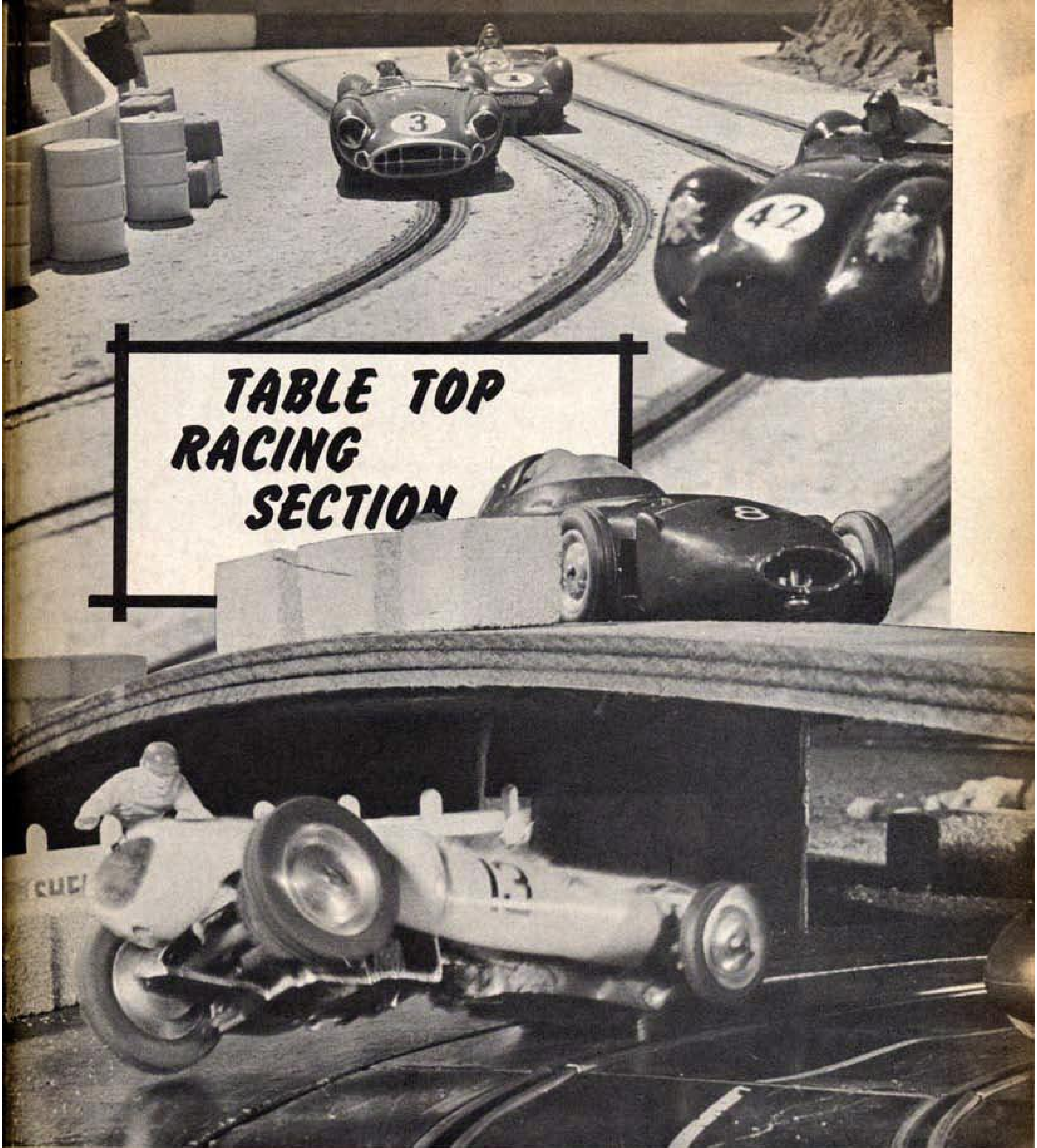


PHOTO CONTEST Each month MCS will award valuable prizes to the readers who submit the best photos of slot racers in action. Send your photos to:

Table Top Photo Contest
Model Car Science
171 Barrington Pl.
Los Angeles 49, Calif.

Here's a New Approach To Racing That Tests Car and Driver

How To Build a Hill-Climb Slot Track



BILL SIPPEL

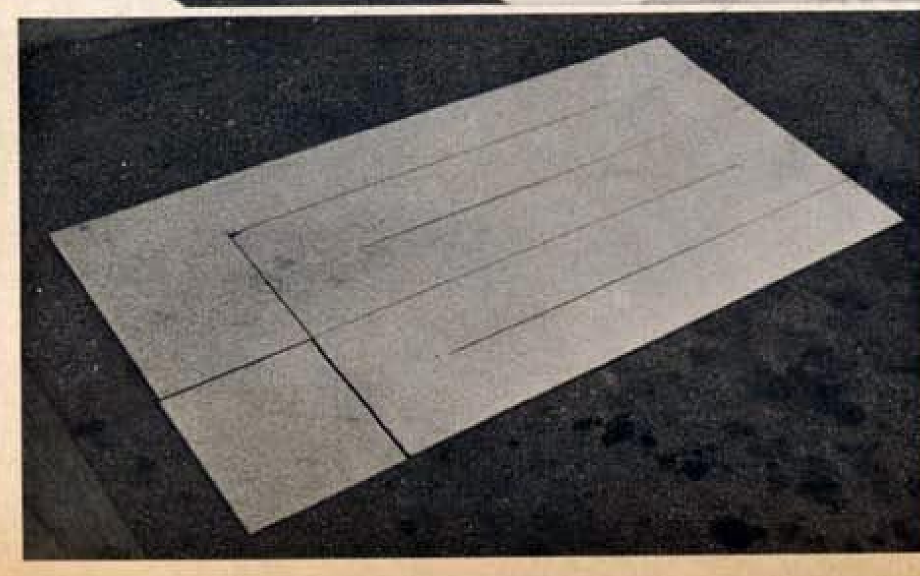
Slot racing cars have duplicated every other type of racing course; why not send them up in a Pikes Peak-style hill-climb, racing against time?

Because the object is timed runs, any body style can be run, with divisions broken by motors and car weights. The track requires only one lane for racing, which means that solo racing can be just as much fun as with a large group of competitors.

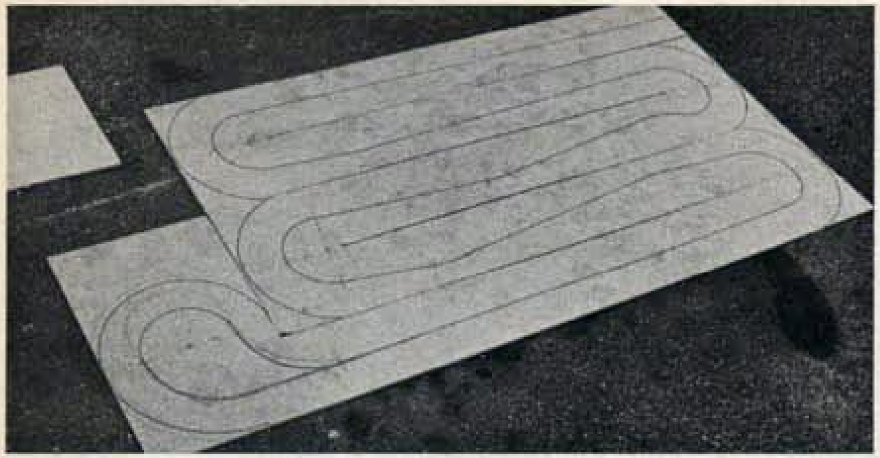
With only one lane and the main base of the track against the wall, the layout takes a minimum of space. Our design permits racing to the top or a timed round trip, with the start-finish line at the bottom.

Material required to build the hill-climb includes one sheet each of 4 x 8 x ⅜ plyscore and particle board, and two sheets of 4 x 8 x ⅛ untempered masonite. Four six-foot lengths of 1 x 6 common lumber and nails complete the basic building components. First step is to measure and cut the plyscore and particle board as per the drawings. A hand ripsaw or electric skill saw will serve.

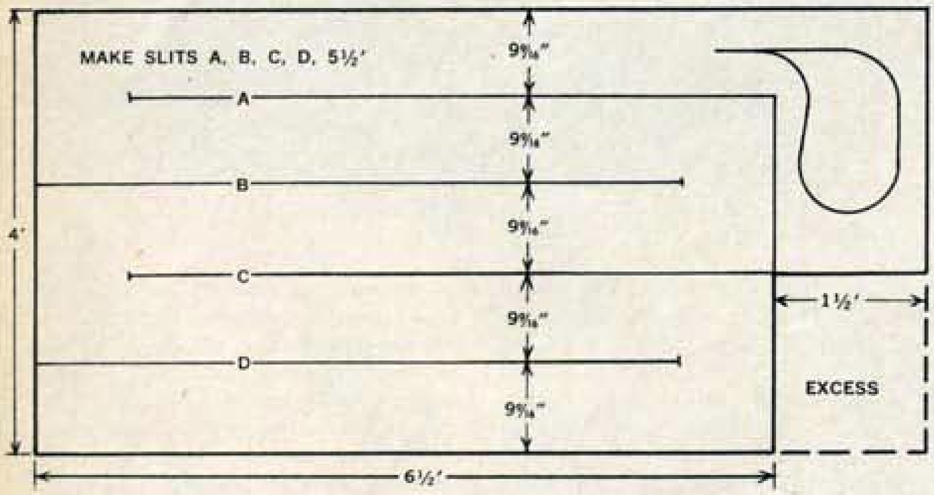
Next, cut the six-foot lumber so that each piece has the proper end angle to run from a flush position on the low side to about three inches high on the top end when nailed into place. When

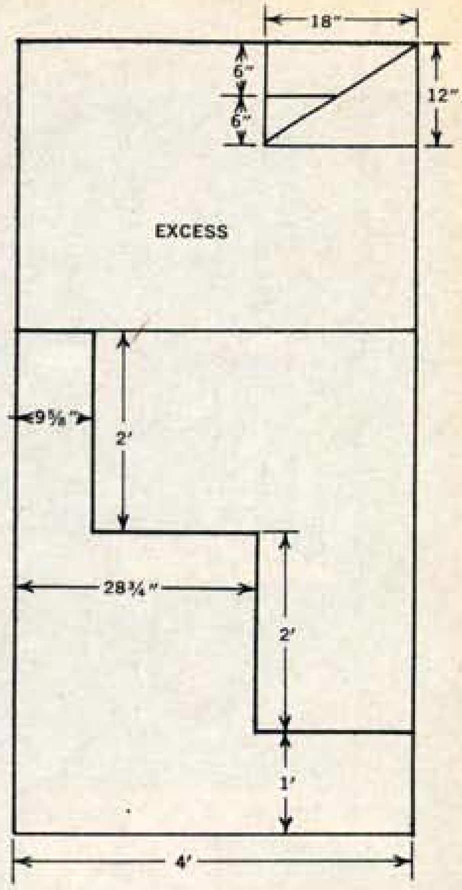


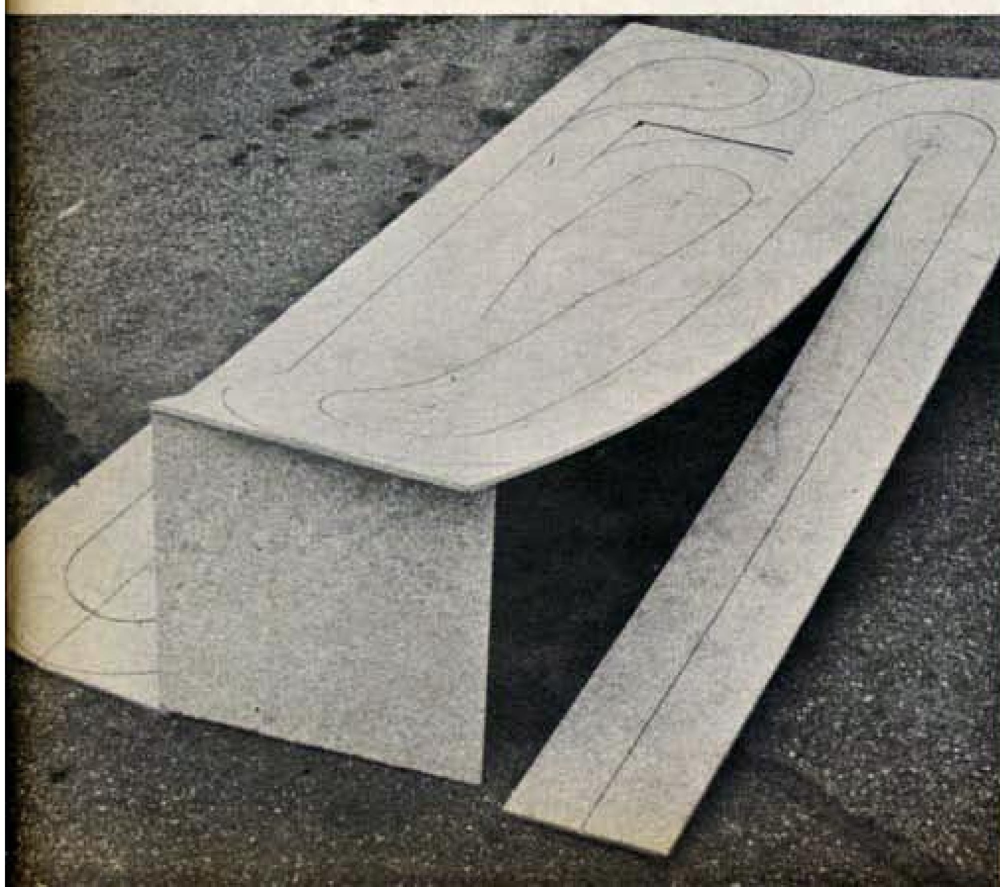
On a sheet of 4x8x⅜ particle board, lay out the cutting lines which will separate the board so that it can be bent into a series of hairpin turns.



After the dividing cuts have been made and before mounting the road bed, draw in the track shape, route with with an H204 power cutter, full depth.



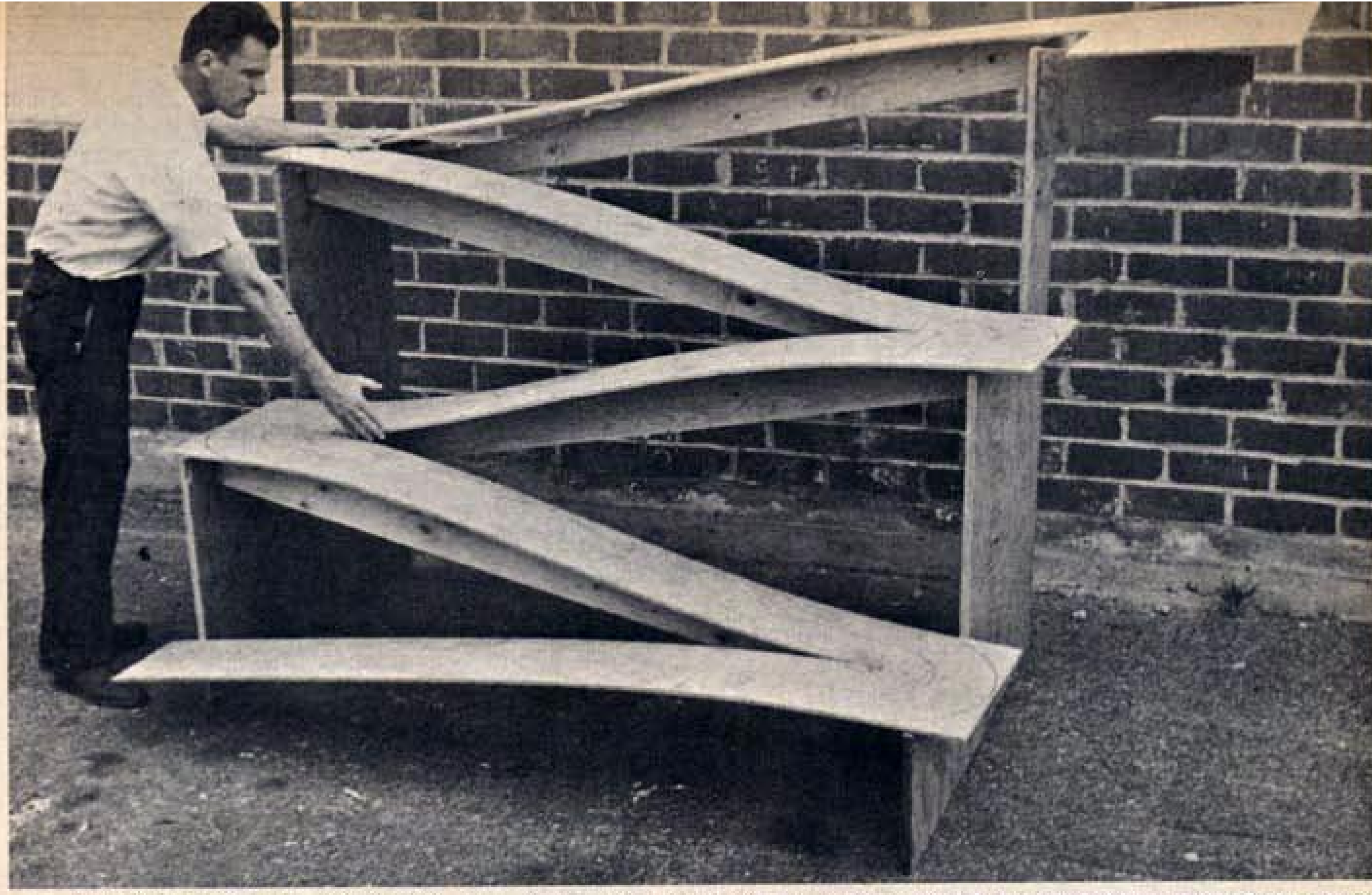






The plyscore must be marked and cut as shown above. It forms the end supports for the hill-climb track.

At left is shown how the track is attached to the end supports that give it the mountainous contour.



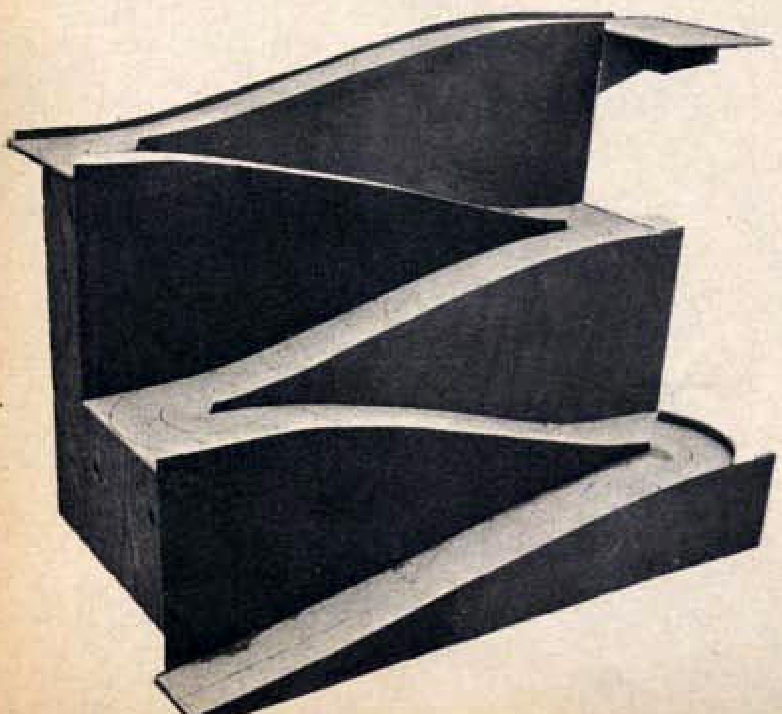
ALL THE THRLLS OF THE PIKES PEAK HILL CLIMB ARE INHERENT IN THIS EASY-TO-BUILD SINGLE-LANE SLOT TRACK.

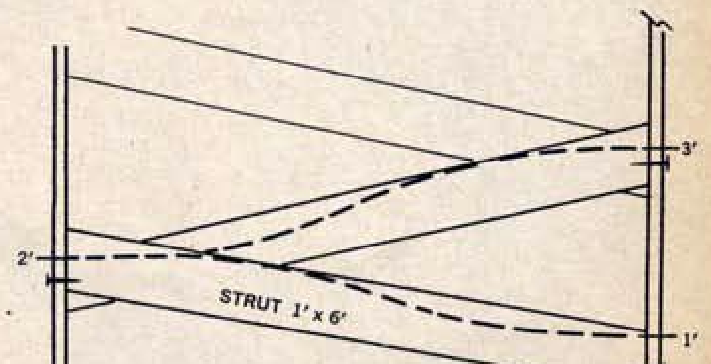
nailing in the cross struts make sure that they will run under the center of each road bed. After they are in place, use a square and measure in one foot on each end board at each end, using the end board as the pickup point. Between these two points, draw in the curves or hill angles you wish the road bed to follow during its climb.

Before mounting the road bed particle board, the track should be routed onto it. After the dividing cuts have been made with the board in a flat position, draw out exactly the way you want the slot to run during the climb. Use a power router (H204 router cutter) and take a full quarter-inch cut. This compensates for shallow areas created during the climb where the track bends upward.

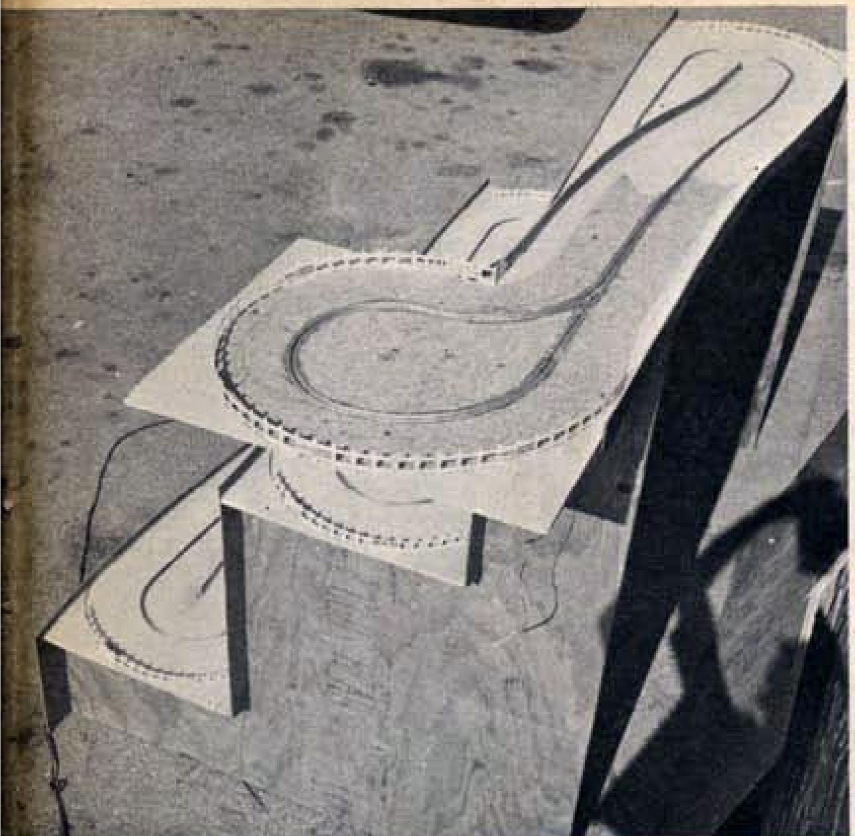
On this layout we used a radius at all ends, but put various mild changes in the straights. And on the cross struts we used slightly different types of climb. During the routing of the switchback curves, we slotted for protective fencing to save the cars that run out of track due to excessive speed.

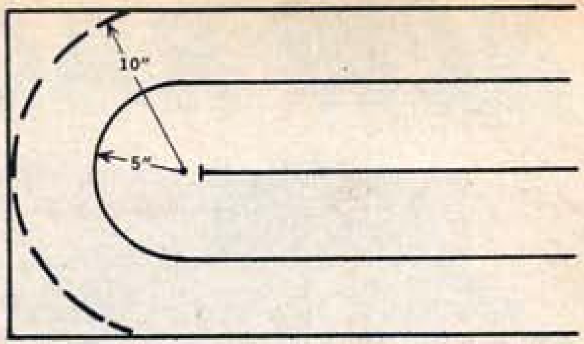
The final carpenter work is with the masonite after the roadbed is nailed in place. We stood the sheet up with a little excess down into the slot created by the first splitting operation. Rather





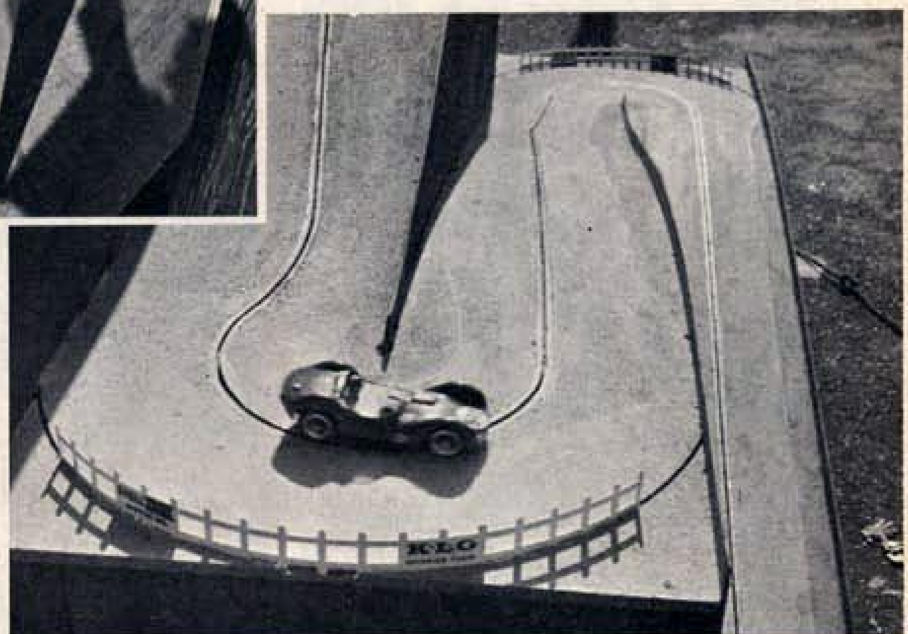
From drawing above to photo at left, building the hill-climb is simply a matter of following instructions, using basic carpenter skills. Masonite is trimmed with a sabre saw to provide a fence of uniform height along each roadway edge.





Correct turn radii are shown in drawing above, while clever track turn-around is in photo, left.

Fences, below, can be made from scrap masonite, glued into pre-cut slots to retain runaway race cars.

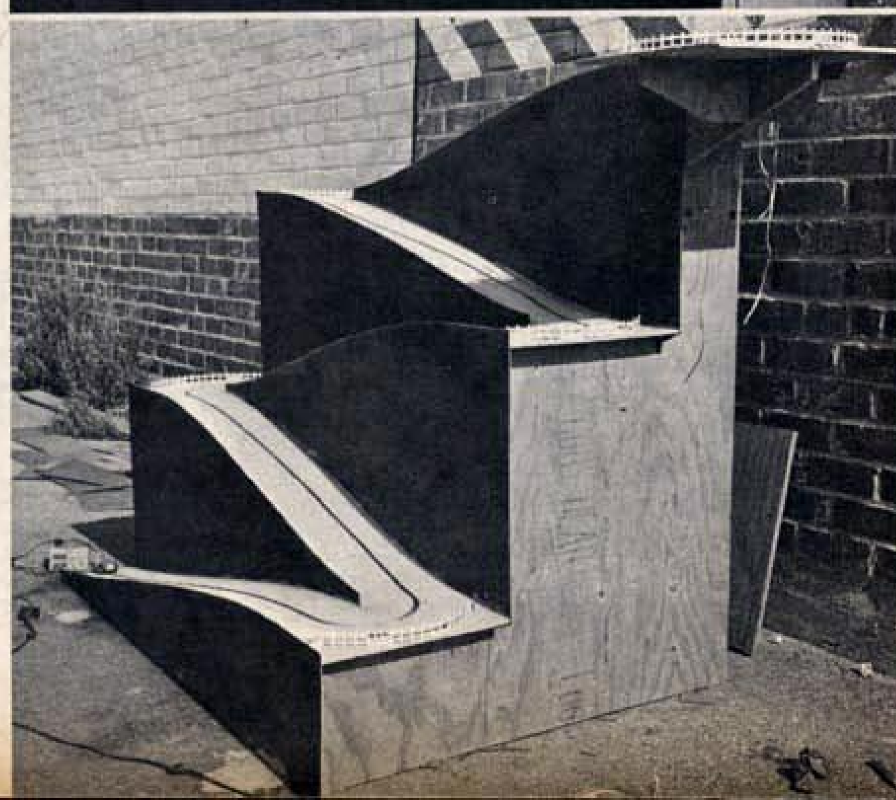


than draw a line along the upper road bed to make the cut, we nailed the masonite to the cross end board and trimmed the sheet off, using the upper road bed as a guide. We used a sabre saw so that by sliding the base plate along the road bed, we ended with a fence of uniform height to retain the cars on the straights.

Now the track must be taped for contact; we bonded in 3/16-inch wide braid. The track is ready for use, but don't forget to slip in the fence ends. They can be made from scrap masonite, glued into their precut slots.

For round trips, we have included a turn-around at the top. To avoid a dual slot or hand reversing the transformer, we have set up a switch that is tripped automatically by the car, reversing the current. If you wish to make full-circuit round trips, a similar loop and switch may be added at the bottom of the climb.

The possibility exists for two or three lanes to be built into the track for club use. Remember, however, that if you are going up and back both with more than one lane you cannot chicane anywhere to save space or you can have accidents. For quicker times, you might try brakes on the hand controllers.



Finished track has realistic contoured slopes shaped from properly cut 1x6 lumber.

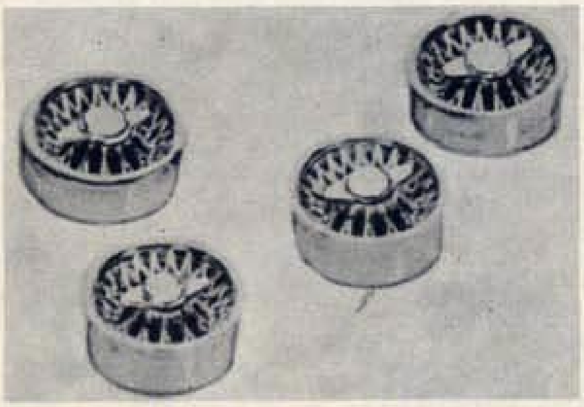
NEW RACING BLOOD



New 12-volt motor has carbon brushes, bronze bearings and brass pinion gear, brushes adjustable.

Strombecker Announces Modifications That Put Their Cars Right In The Race

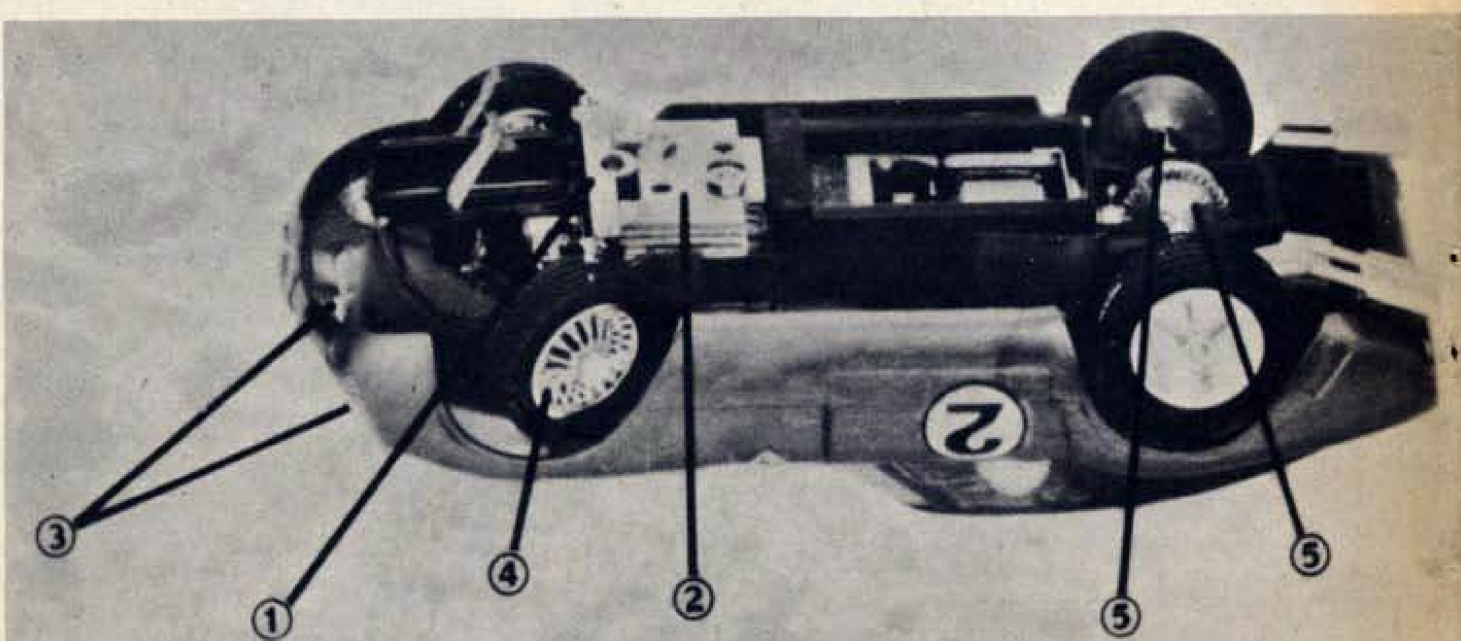
Practically every one of today's slot racing enthusiasts got his start in the sport with equipment by Strombecker. Not only was this the first mass-produced line of table top gear by a major U.S. company, it was ideal equipment to teach the techniques of the sport. Now that a great many of the table top fans are more advanced, Strombecker is announcing new components that will up-date their cars. Here are competition accessories and modifications that will create a stir on any track.



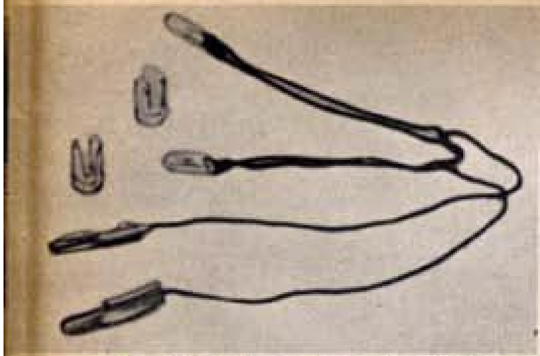
Spoke wheels have knock-off pins, deep spokes and "air-cooled" brake detailing. They are silver plated.



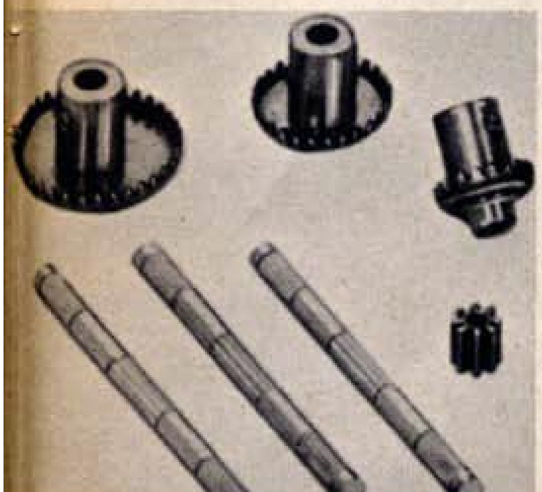
This competition accessory group adapts cars for better track performance. Included are screw axles, brass bushings and pinion.



COMPONENTS: 1. ACKERMAN STEERING. 2. BODY WEIGHTS. 3. HEADLIGHTS. 4. SPOKE WHEELS. 5. COMPETITION GROUP.



Headlights for night racing include two bulbs with lucite lenses and complete easily installed wiring harness.



New steel drive gear assortment has a steel pinion and crown gear. Set has a gearing combination good for just about every common track condition.



Even Ackerman steering is possible for the Strombeckers. This kit is adaptable to all of the company's 1/32 scale cars and includes brushes and wheels.



Body weighting can now be handled with this set which will definitely contribute to better bite and handling.

INTERNATIONAL RULES for Road Racing

Electric car racing has mushroomed around the world with a minimum of organization. If it is to survive and flourish, it must be standardized, much as is model railroading. This is bound to come. The end result will surely be more than one scale, but whatever sizes result, they must be maintained.

Just how did the sport originate? And where is it today? It all began in England about eight years ago. And by the time it caught hold in this country, there were some basic rules already set down, which have permitted clubs here to standardize and race with each other. In fact, cars are regularly mailed around the world to compete in international events.

There are loose ends in the rules, and individual clubs often set up minor variations. But the major rules have stood through the years, indicating that they are sound. The current regulations are known as the Aintree Standards. Although they were not written until 1961, they came directly from the Southport Standards, written in 1955. The difference is that Southport was rail racing, while Aintree is slot racing. Since slot racing is most popular in the United States, we will list its rules:

1. All models must be built to 1/32 scale with tolerance plus or minus 1/16-inch.
2. The cars may be fitted with any type of electric motor capable of of operating on 12 volts D.C. and suitable for the required scale.
*3. No car must exceed the maximum overall width of 2⅜ inches.
4. No projections are allowed beneath the car other than the steering guide and contacts.
5. All cars must be scale models of full-size prototypes.
6. All cars must carry drivers.
*7. Maximum length of guide, measured from extreme front to extreme rear, must not exceed ¾-inch.
*8. The guide must not project more than ⅛-inch below track level. This to be checked by a simple jig having a slot ⅛-inch deep. If the front wheels turn, then the guide depth must be reduced.
9. The slot width in the track surface must not exceed ⅛-inch.
*10. The contact surfaces on each side of the slot must be at least ½-inch wide.
11. Looking in the direction of travel, the positive contact must be on the left side of the slot, the negative on the right.

The rules marked (*) vary between clubs. In some cases they are as read with local additions.

The rules specify 1/32 scale, by far the most popular. What confuses many beginners in this country is the fact that many manufacturers produce cars and advertise them as 1/32 when they are not. Unless they actually measure out to scale they are not accepted. Be careful to check any car in question for true scale.

Because clubs in this country are meeting, either in person or by mail, it is essential to standardize the rules so that all cars have an equal chance when away from the home track. Such a move could pave the way for an International Championship or a World Point Champion via a series of races throughout the world. You can do your share by observing and upholding the rules. When everyone competes on an equal basis a victory has real importance.



NEW IDEAS FOR SLOT RACERS



Nothing adds that extra touch of authenticity to a table top layout like the presence of people in scale. If your track is in 1/32nd scale, finding such figures has been a real problem. But now the leading maker of Mini-Men, the Ulrich Co. of No. Hollywood, Calif. offers "instant people" kits to scale.

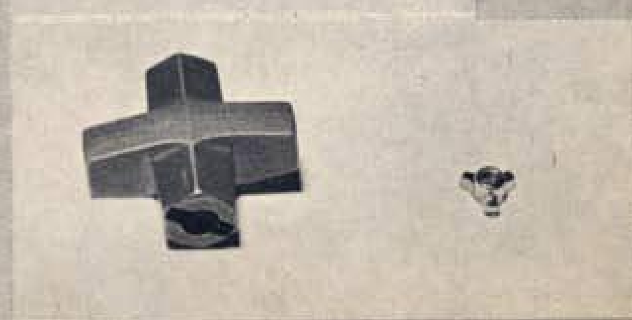


One of five trackside building kits in 1/32 scale is this Pagoda Control tower by Strombecker. When erected it measures 8-inches wide, 7-inches high and 4-inches deep, with top floor a control tower and the lower level a double ticket booth. Material is polystyrene plastic.

From Dynamic Models, Inc., a new line of slot racing accessories. At right, real magnesium wheels in 1/32 or 1/24 scale. Lower right is their reverse rim custom wheel for all popular tires. Hardened and ground axles, threaded and available in six lengths are shown below, while at bottom is a threaded knock-off nut with a wrench to match.

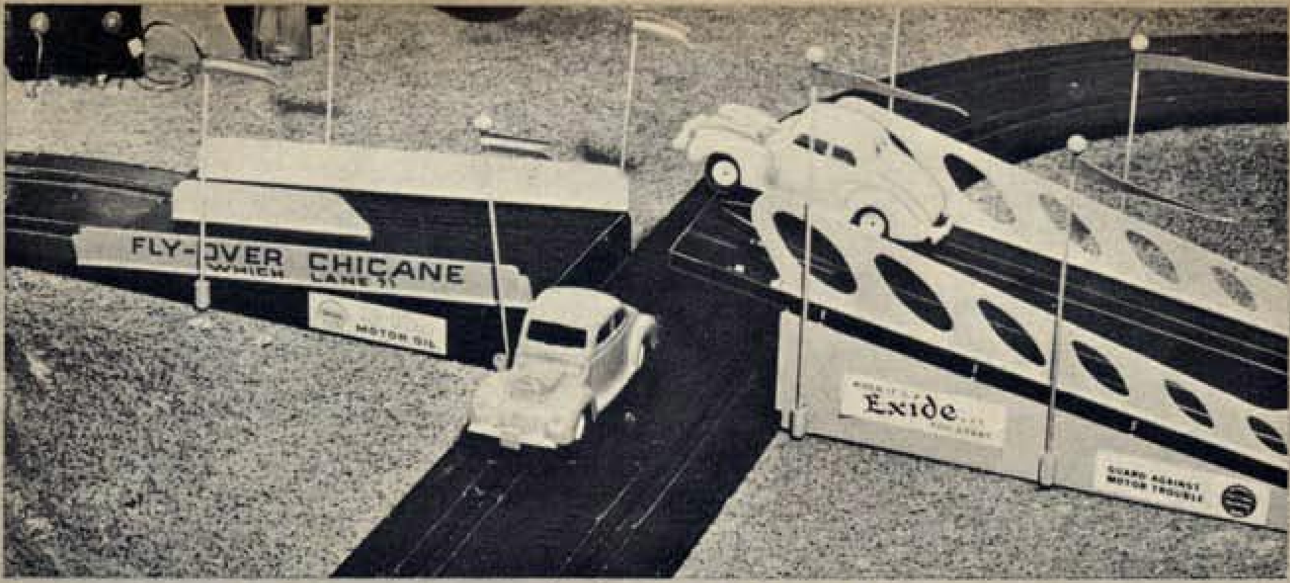




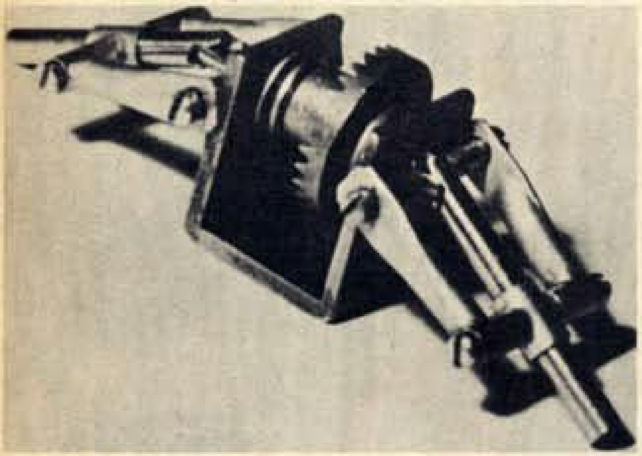




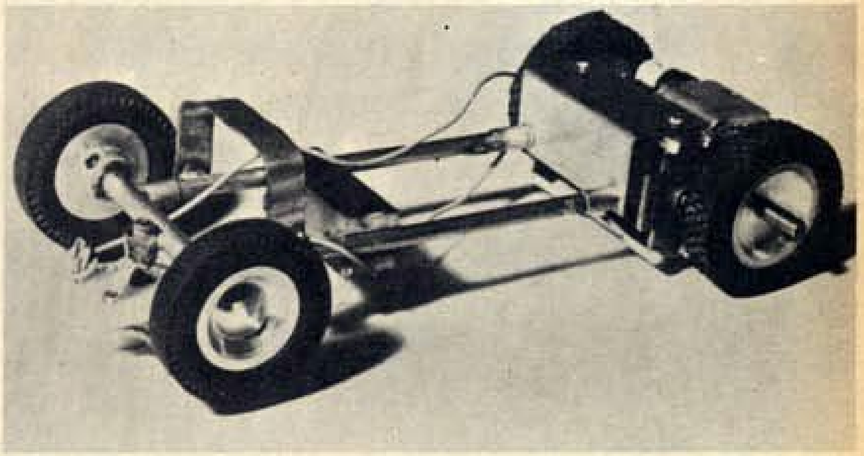
Last month we told you of the fine transistorized hand controller made by Stern Electronics of Los Angeles. The happy news now is that a higher than expected reception has allowed the maker to lower the price to $10.95.



Slot track racers really jump with this new Fly-Over Chicane by A.C. Gilbert. The cars race up a ramp into the chicane, then change lanes in mid-air as they hurtle a gap in the roadway to land safely on the other side and keep going. The new jump feature is available or as a part of a new Autorama set. It's just the thing for racing excitement.

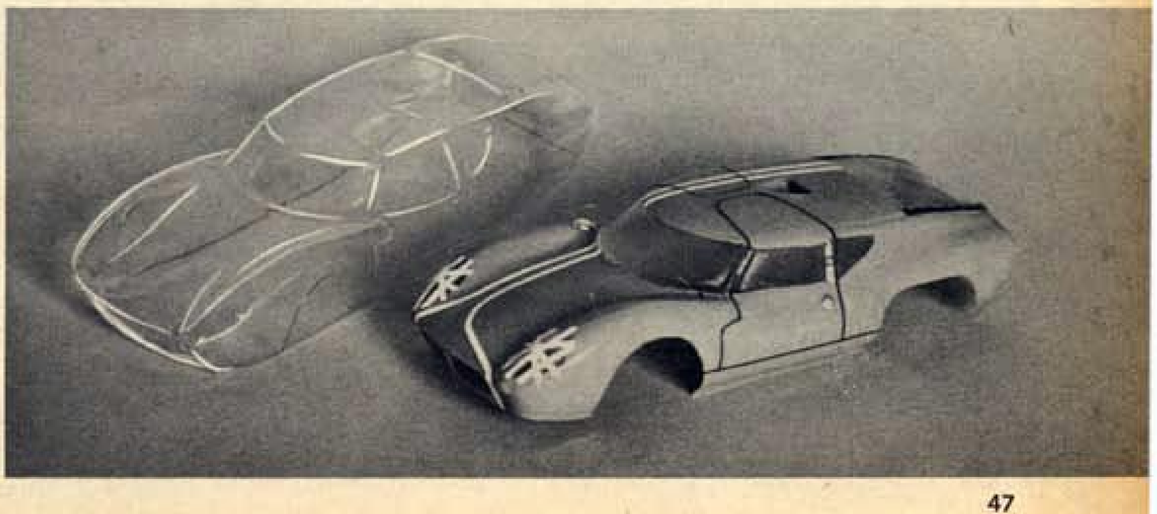


Independent rear suspension for 1/24-25 scale cars is new by Crane. Constructed of brass channel, brass rod, and seamless brass tubing, all points are silver soldered. It will fit sports, GT, GP and stock cars. Price with gear mounted, $5.10, from Auto World, Box 691, Scanton, Pa.



From Auto World, a tubular brass lightweight frame designed by Crane fits the Pittman DC 704 motor. Suitable for 1/24-25 scales, it is constructed with all joints silver soldered for maximum strength, while frame rails are adjustable for any wheelbase. A balance weight is supplied so that anyone can experiment with weight distribution.

Authentic reproductions of many top racing bodies are now offered in clear plastic by the "Stormer" brand of Valley Plaza Hobby Shop in North Hollywood, Calif. The 1/24th and 1/32nd scale shells are painted from beneath so that the finish is chip-proof and of high gloss. Decals included in the $1.25 to $1.49 kits.



Ferrari Testa Rossa 250





How To Convert The Strombecker Kit Into a Racing Thoroughbred



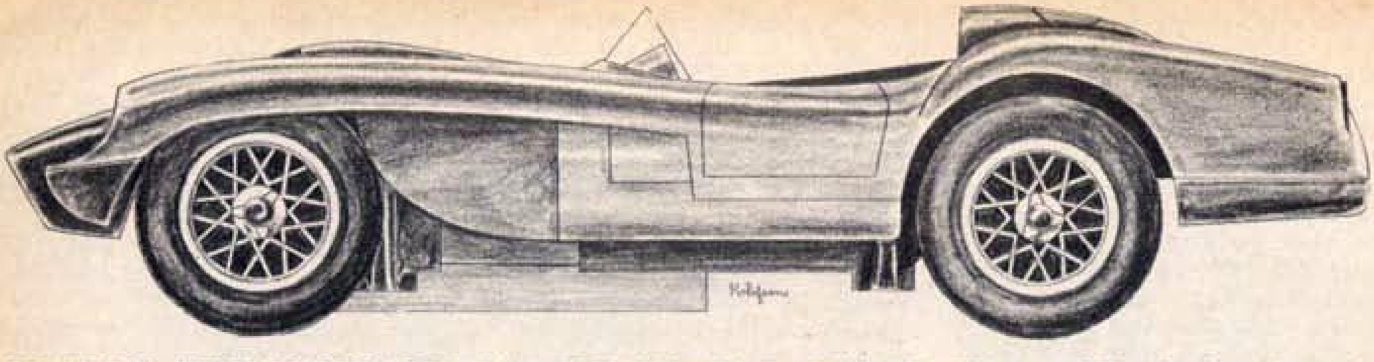
Comparison of the Strombecker Ferrari before and after the MCS conversion. In both shots the standard kit is shown at the right.

BY BOB ROLOFSON

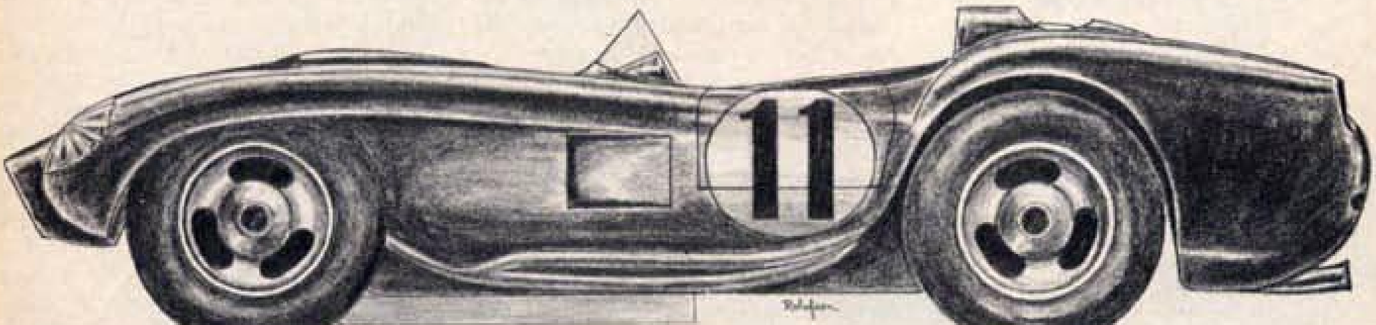
The "250" Ferrari Testa Rosa was one of the most unusually-styled cars ever seen in International competition. The Scaglietti shell combined the graceful design of a "one-off" custom Touring type of body, with the brute size and full-bore "go" long associated with Ferrari team cars. With Strombecker's version of the car as a base, it is fairly simple to build a racing replica of this famous machine. The Strombecker Ferrari was evidently scaled from the Von Neumann Testa Rosa, complete with the number *eleven* made famous by John in West Coast competition. Our restyling job combines the best features of this machine, with the later team cars which were raced by the factory at Sebring, Florida.

We began our conversion by removing the frame, driver, steering wheel, and decals. The shell was then thoroughly sanded to remove burred edges and parting lines. The headlight holes were filled with Plastic Balsa, and shaped as if they had the proper clear plastic covers. Small ripples and dimples in the shell were filled with body putty.

The first step toward filling the Ferrari body is to build a balsa wood "dam" three and a half inches long, and an inch wide. Cover one side with Scotch tape and clamp it to the inside of the shell, with the slick tape-side facing outward to act as a smooth release surface. Pack facial tissue into the pocket between the outside of the body and the inner frame wall. On top of this build-up a layer of Plastic Balsa. When this has set-up, spread another layer, and another,



DRAWING BY AUTHOR ROLOFSON OF THE UNALTERED STROMBECKER VERSION OF FERRARI. NOTE HOW CHASSIS SHOWS.

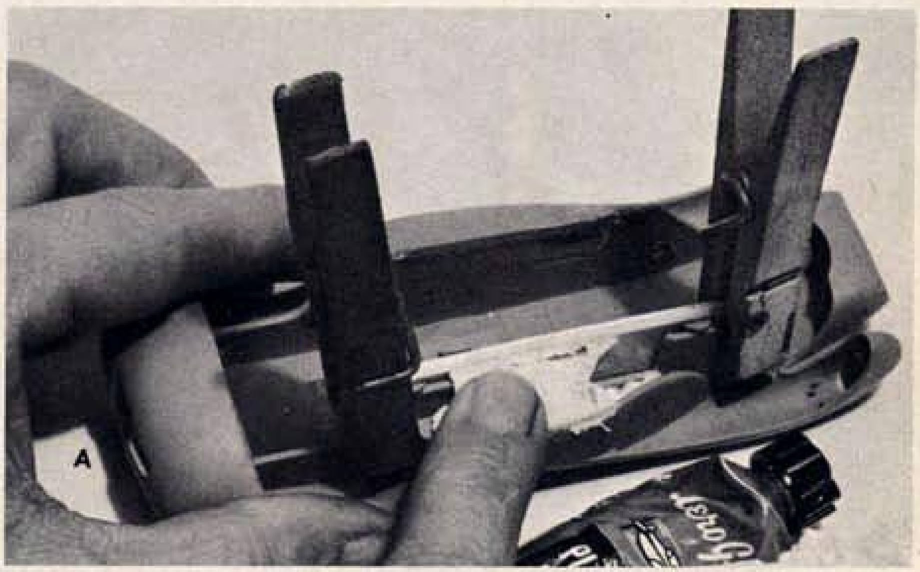


HERE'S THE FINISHED PROFILE OF ITALIAN RACING CHAMP AFTER LINES ARE CARRIED THROUGH AND DETAILS ADDED.

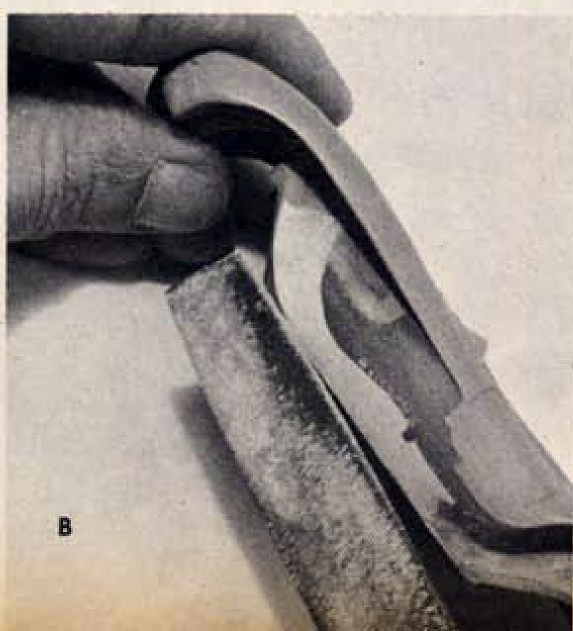
until the cavity has been completely filled, and the wheel wells fared into the body. Saw a block of medium hard balsa to 1¾ by ⅝ by ½ inches. Shape this to fit under the tail section, resting flat on the two body frame rails. When this has been *securely* glued in place (we used epoxy glue), build up the tail by faring the block into the body with Plastic Balsa. Fill the indented square in the tail (it is too high) and add enough plastic to round off the rear, which is quite flat. DO NOT FILL the spaces above the block. These will be used later for adding weight to the finished car. Remove the balsa dam from the filled side, and repeat the body filling (figure A) process on the other side of the shell.

When everything is dry and hard, begin shaping the body (figure B) with a medium file, and work gradually down to fine, open-coat sandpaper. Smooth the body lines, shape the tail section, and roll the body under along the sides. Since the Plastic Balsa is quite porous, spread a thin layer of body putty over the plastic, which will seal the surface and fill any fine cracks between the wood and plastic. After this has been sanded, spray on several coats of gray primer. This will complete the filling process, and show up any irregularities in the body surfaces.

Pencil-in the side vents which are 7/16th long, and 9/32nds of an inch high. Drill a small hole (figure C) in each corner, and *carefully* cut between the holes with a broken piece (figure D) of coping saw blade. It is a bit ticklish getting the blade started, but once



A



B



C

it is through, the plastic cuts like hot butter. After pulling the facial tissue stuffing from (figure E) the open vent holes, true the cutouts with a small flat file. The back of the vent is made from a small piece of thin wood, carefully fitted and glued. Gaps at the top and bottom are filled (figure F) with body putty and sanded. The square hole in the rear (centered between the tail lights and top and bottom of the tail) is cut out and filled with a thin piece of wood measuring 3/8th by 5/16ths. This piece meets the body at the bottom, with the top tilted inward about 1/8th of an inch. The heat extractor holes are drilled, sawed and filed into shape with a small rat-tailed file. If the saw blade slips, or the plastic chips during all of this drilling and cutting, don't fret; finish the cutouts and then fill these booboos with body putty.

The prototype cars carried their grills close to the front of the nose. The grill in the Strombecker version is set well back, probably to simplify their mass-production die. This can be removed in a few seconds, via a drill hole and thin saw blade. The Model Car Science "250" sports a grill cut from regular aluminum fly screening held in place by a bead of epoxy. It is quite a bit out of scale, but is strong, and adds a certain amount of dimension to the nose. There are small bubbles on either side of the nose section which were not on the prototype. These were removed by *carefully* sawing out a quarter-inch section (figure G shows one cut, and one stock) on each side. The small remaining indentations were filled with putty, and all nose surfaces sanded clean. Finish off with a small three-cornered file, scribing a line across the nose to indicate where the nose piece attaches to the body. (Figure H)

Following the lines in the head rest, saw out the gas cap section (this was always removed in competition), and ream the hole smooth. Our recessed gas cap was made from an old 24th-scale Strombecker knock-off hub, with the ears filed off and a dash of silver paint added. We mounted it (after the body had been completely finished and painted) by sticking a small piece of Scotch tape across the opening in the head rest, pushing the filler cap up through the hole until it stuck to the tape, and then spread glue across the bottom. This held it in place until the glue had set, keeping glue off of the painted surfaces.

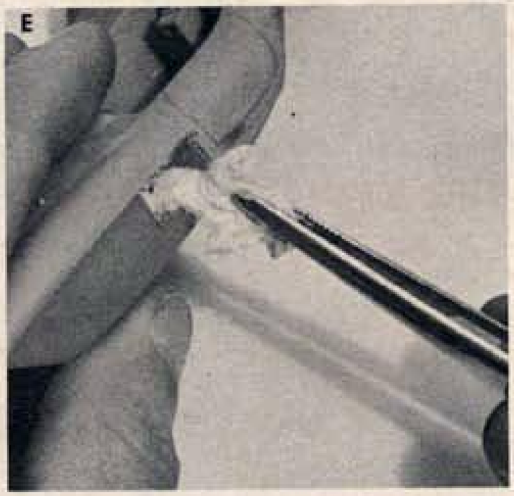
If you are going to make exhaust pipes, fit them before painting the body. This way, the body can be shaped to fit the pipes, which simplifies the whole procedure. Our pipes were fabricated from pieces of brass tubing, bent and soldered into shape, and epoxyed to the fitted shell after it had been painted.

Just before we began the painting process, we *carefully* scribed new door lines, and followed all other body lines with a small three-cornered file. Then came a good heavy coat of gray primer, followed by a pumice rub, two coats of red lacquer, and a final light rub. The cockpit, tarp, hood straps and front of the hood airscoop, were painted flat black. The decals were cut down a bit, to bring them into scale. Ferrari emblems were brush painted with enamel on lightweight paper, cut out, and glued with Wilhold glue. We painted the headlight covers silver, and glued tan (shopping bag paper) crash tape over them, leaving slight gaps for the silver to shine through. When the paint and glue had thoroughly dried, the car was given a wax rub, which makes it sparkle, and protects the finish from fingerprints and oil.

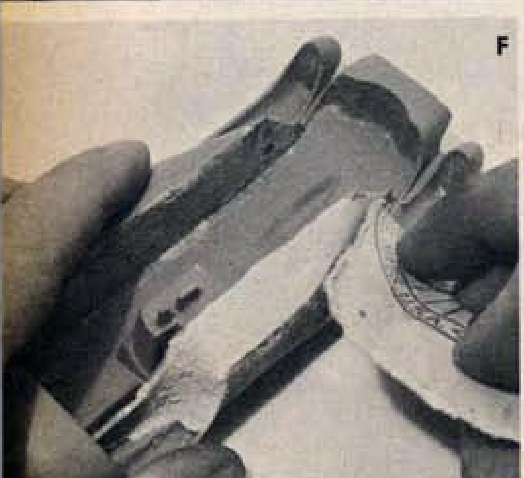
The stock car weighed 3 ounces; 1½ on the front wheels, and 1½ on the rear wheels. Through trial and error, we discovered that this "ideal" 50%/50% distribution was fine for the full-sized prototypes, but was extremely unsuited for electric car racing. Our final optimum total weight was 4½ ounces; with 1½ at the front, and 3 at the rear, for a 33.33%f/66.66%r distribution. This balance was achieved by packing small bits of lead into the hollow spaces (figure I) above the tail block. We anchored them in place by packing the section with soft, children's modeling clay.



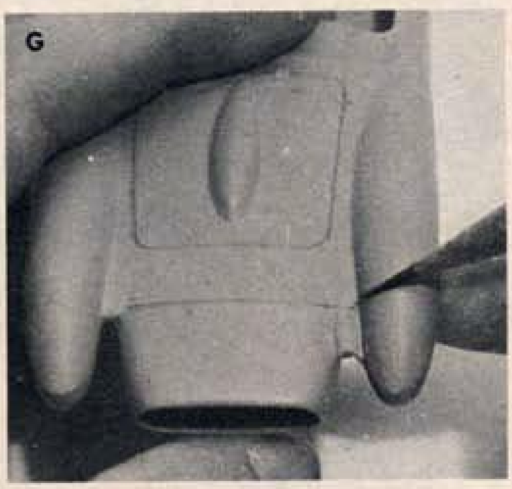
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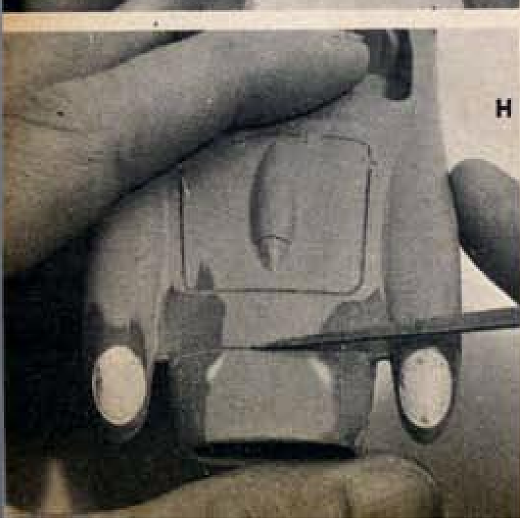
E



F



G



H



I

Unconventional
ROAD RACING GUIDES

It is no secret that one key to winning at slot track racing is keeping the guide unit in the track slot. The best way to do this would be to try and drive the guide solidly into the slot so that the more the car would try to leave, the more guide would want to stay.

In conventional systems, a guide pin or blade sticks into the track groove. Thus, it positions the contacts and guides the car around the track. However, there are important modifications to this system, and we will explore two of them. One is called the sliding guide, and cars using it are commonly referred to as sleds; the other type is the fallaway, which does a fascinating job.

Sleds were developed several years ago by mating a guide pin and two roller pickups working on a cross torsional arm. The object was for the torsion arm to force the two rollers to maintain solid contact with the track contact strips. To perform well, the total car weight was needed to force good torsion pressure. Consequently, the front axle floated and the front wheels rolled, supporting nothing. It was really three-point racing.

It wasn't long before someone found that a car could be made to go faster if the roller was locked and the car slid on it. Then the pin was replaced with a blade guide, but the principle retained. The torsion arm was eliminated and pressure maintained by having the weight of the car press the guide's braided wire tightly to the track surface. The total effect — front wheels floating — was maintained. It is easy to see that the guide will hold in the turns more effectively than with conventional styles, but is it proper or fair? This is up to the clubs; there are strong feelings on both sides.

The fallaway system began as a technique to improve the sled. In this case, the wheels support the car front and the guide system falls away into the groove. There are various ways to maintain fallaway pressure for constant contact including weight on the fallaway unit, or downward spring action created via rubber bands or small coil springs.

Hard acceleration with excessive spring pressure will cause the front of the car to float and in some cases do wheel stands down the straight. With the proper balance of pressure it is possible to maintain good contact and keep all four wheels on the surface, except over bumps when the front will float smoothly and realistically into the air. Cars with long fallaways, swinging from near the rear axle, have been seen to have the front climb over the tires or body edge of another car in a curve and return to the track surface without breaking power contact. How authentic can it get?

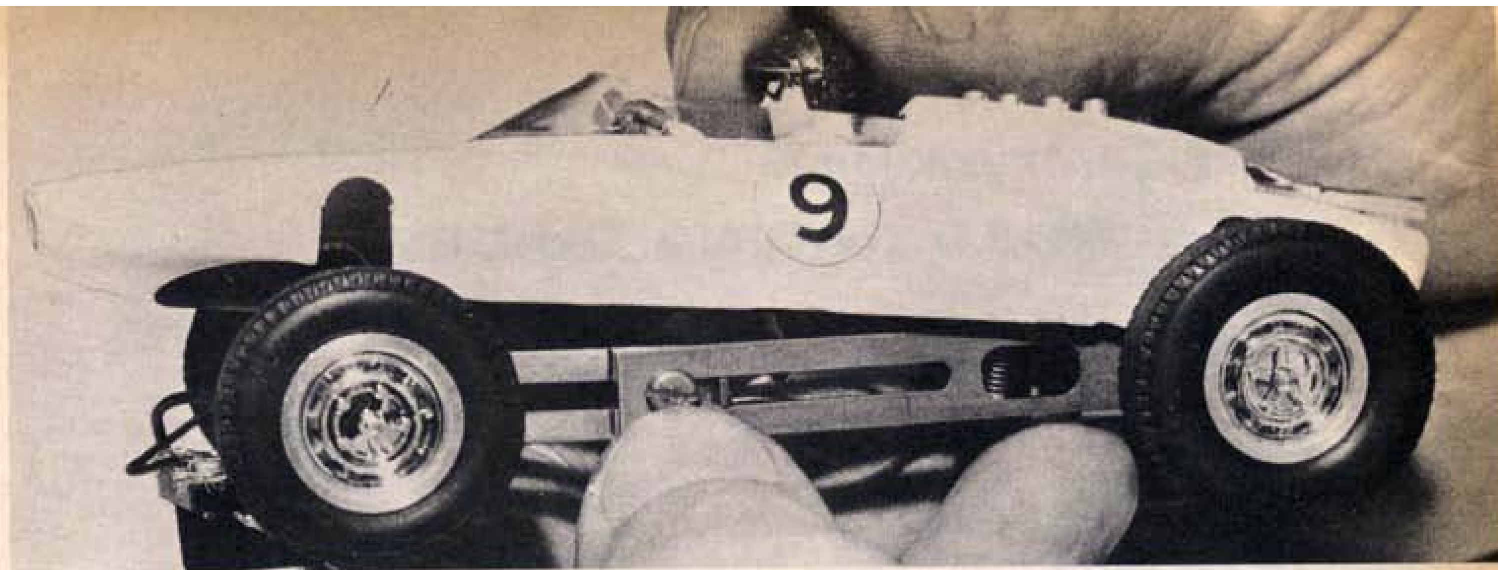
This system, too, has its friends and foes lined up on both sides. Both systems win consistently over conventional cars. If your competitor has been holding his slot extra well, a peek underneath might be in order.



With the sled system, the car's front wheels have very little more functional use than to serve as outriggers for stability around turns. This is outlawed at some tracks.



TWO EXAMPLES OF THE FALLAWAY SYSTEM. PRESSURE ON GUIDE IS CREATED EITHER BY WEIGHTS OR SPRING ACTION.



REVELL ROARS INTO

Soon model racing drivers will be able to find out for themselves the results of over a year's engineering development by Revell, Inc., in producing a stable of powerful, rugged speed machines built to make them top eliminators from the word "Go!"

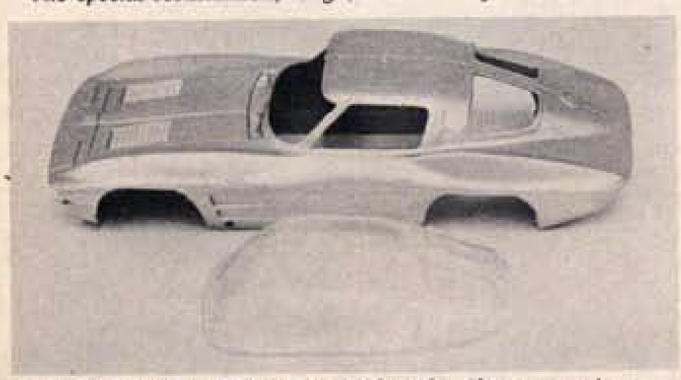
Designed to race on most commonly used 1/32nd scale factory manufactured track, or on scratch-build regulation track, the first four cars include two Gran Turisimo's in 1/32nd scale; a Jaguard XK-E Coupe, a Corvette Sting Ray Coupe; and two Formula I Grand Prix 1/25th scale machines, the Lotus and the British BRM.

The special formulation, tough, wreck-resistant, injection molded, officially colored plastic bodies carry the well known touch of Revell authenticity. With their shining vacuum-metalized parts, clear plastic windshields, and realistic Bell-helmeted driver, it is difficult to tell one from a real racing car — except for size.

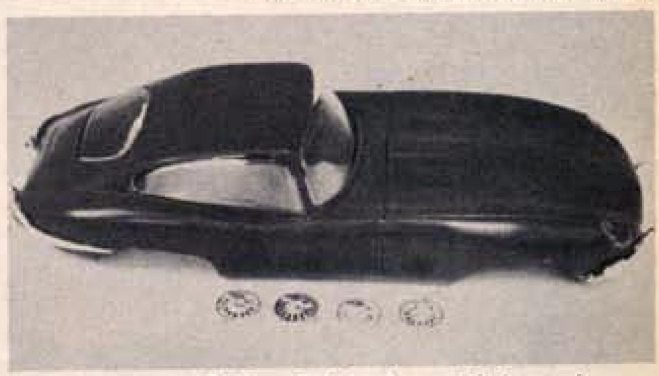
The all-metal chassis constructed of lightweight, non-magnetic aluminum for strength and rigidity comes in 1/25th and 1/32nd scales, and are adjustable for different wheelbases. Threaded axles provide tight secure wheel mounting, and self-lubricating oilite sintered bronze axle bearings give high, trouble-free performance.

Two sizes of steel crown gears, 32 and 24 toothed, are supplied with each chassis. Used with the 10-toothed pinion, also supplied, they give the model pit mechanic a choice of ratios of 3.2:1 or 2.4:1. The 32-toothed gear, giving greater reduction, results in higher acceleration when whipped out of the corners of curved road racing tracks. The 24-toothed gear is for maximum speeds in drag or straight track competition.

The specially designed high performance pick up, with its nylon guide and flat braided wire contacts, fit the most popular tracks, as well as the approved British and U.S. regulation slot racing



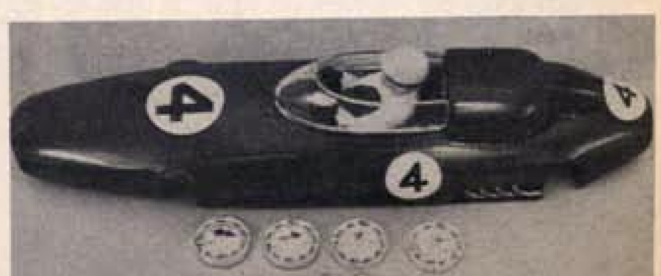
Corvette Sting Ray body is in 1/32 scale. Clear, one-piece molded windshield and window unit is easily inserted.



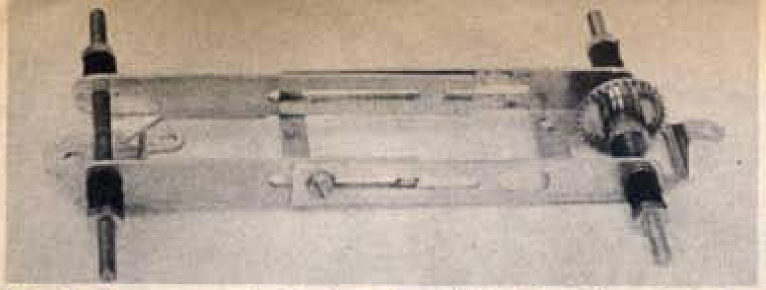
X-KE Jaguar is in 1/32 scale injection molded out of hi-impact plastic. Chrome wheel inserts are included in kit.



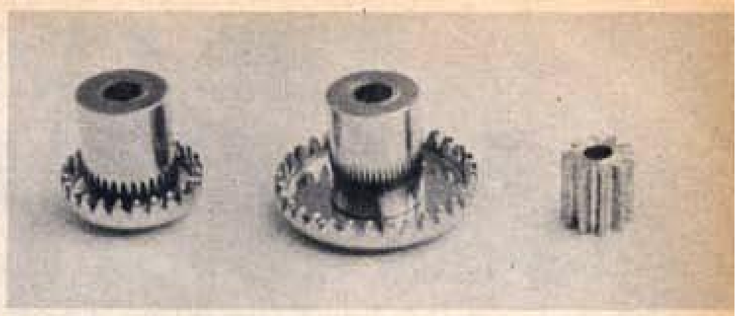
Completely assembled 1/25th scale Lotus is ready for racing with Revell-Pittman R-66 motor and Dunlop tires.



British BRM in 1/25th scale before chassis mounting. Besides wheels, kit includes racing mirrors and racing driver.



Chassis of non-magnetic aluminum is quickly adjustable to desired wheelbase. Tight screw adjuster gives very good rigidity.



Gears in chassis kit have 24 teeth (left) and 32 (center). 10-toothed pinion gives choice of ratios.



Precision machined aluminum wheels have knurls and deep rims to insure secure tire mounting.

RACING

AN INTERESTING APPROACH TO TABLE TOP BY A LEADING MANUFACTURER . . . RACING PRODUCTS TO BE SOLD IN COMPONENT FORM RATHER THAN BY THE SET

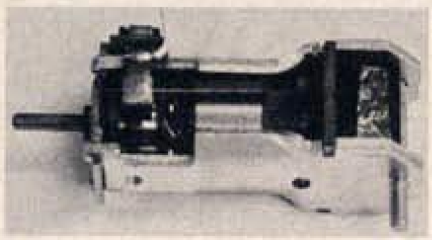
track. Nylon spacers are provided for correct and authentic tread width adjustments. The wheelbase is quickly adjustable to carry a variety of body shells. Ingenious and quick assembly of the chassis component is accomplished with bolt and thread metal insert securing.

The precision-machined, true-running aluminum wheels have threaded hubs. Jam nuts provide positive locking, and the wheel's deep knurled rim grips the tires securely.

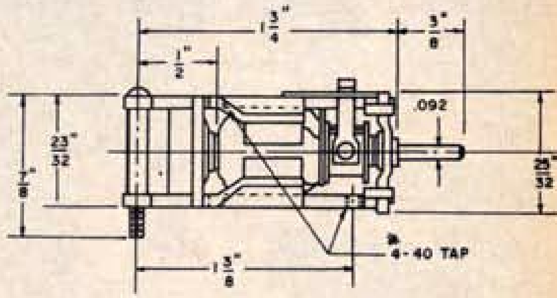
Knowing that a "win" often depends upon the resiliency and traction of the car's rubber, Revell has developed a special racing rubber formulation for its tire equipment. Completely authentic reproductions of Dunlop and Goodyear racing tires were built for long wear and positive traction.

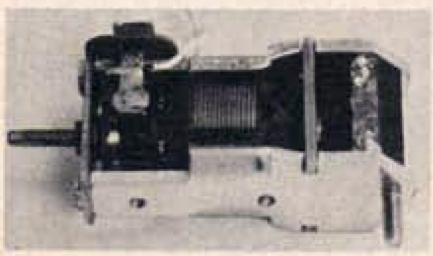
The motors with special windings are manufactured by Pittman for Revell. They are the RP-66 for 1/25th Grand Prix cars, and the RP-77 for 1/32nd Gran Turisimo cars.

One of the most interesting features of the Revell line-up of trophy-winning machines in its Racing Shop is that body kits, chassis kits, tires, wheels and motors come as separate units. Designed for easy speed assembly as well as speed performance, the separate unit concept gives versatility to each component for use with other model cars — either factory-built, scratch-built, or customized — in 1/25th and 1/32nd scales.

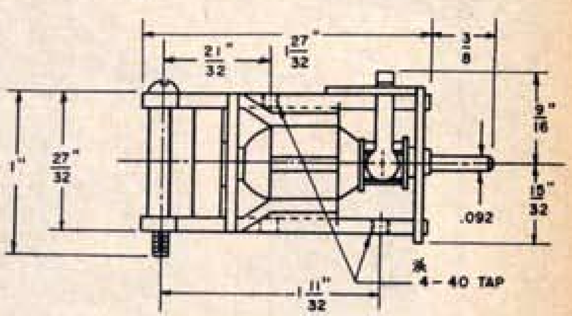


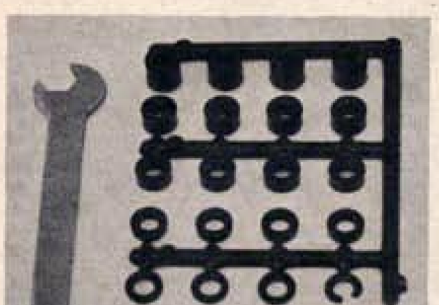
Revell-Pittman RP-66 12-volt motor powers both 1/25 and 1/32 scale cars. Dimensions are shown at right.





RP-77 motor was especially designed for 1/32 scale Gran Turismo cars. It is of five-pole design, 12 volts.





Set pf nylon spacers for wheel width adjustment comes with special wrench in the Revell chassis kit unit.



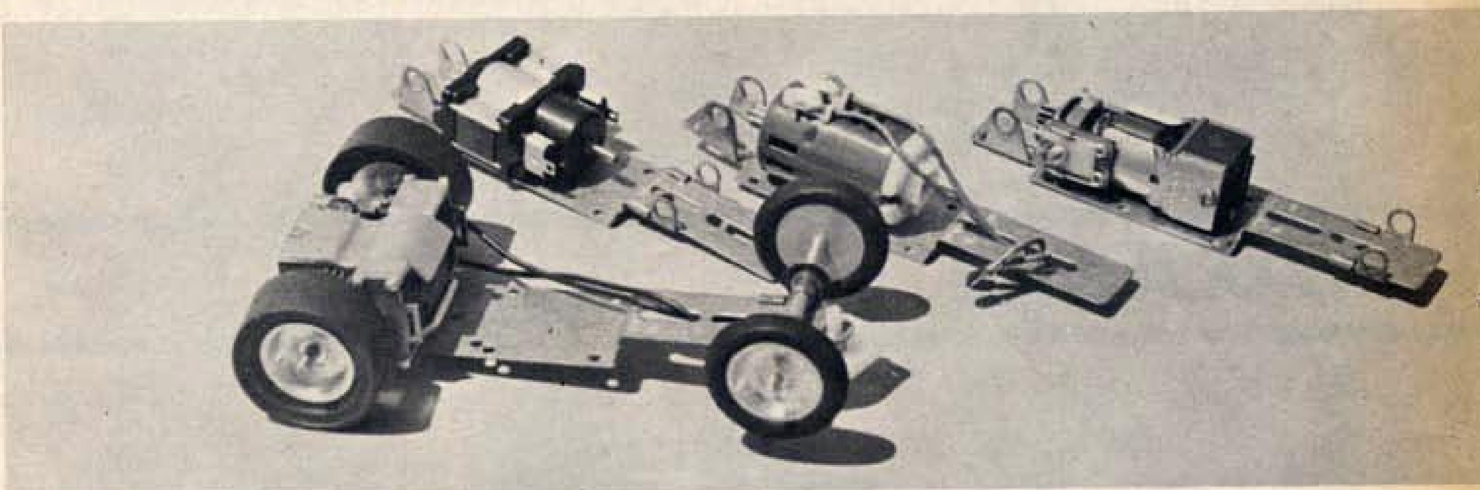
Profile of pickup and nylon guide from the chassis kit. Notice screw-type retainer bushing for positive hold.



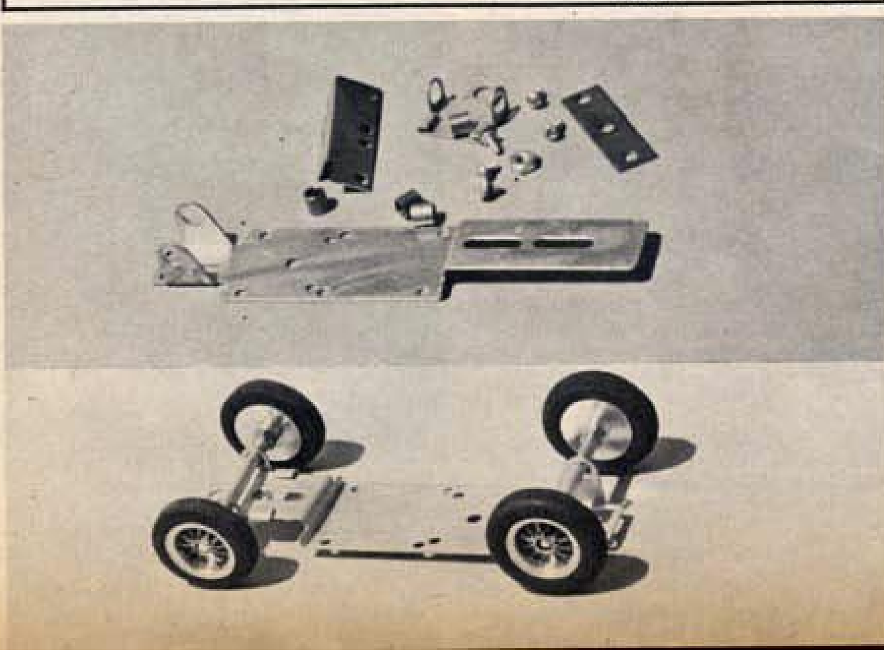
Part of Revell's test procedures to check development of their new motors. Oscilloscope gives readings on acceleration, deceleration and speed.

THE BEST CHASSIS FOR TABLE TOP RACING

An MCS Survey Of Currently Available Components



Make	Weight (Ounces)	Max. W/B Inches	Min. W/B	Frame Width	Motors Fit	Price
Gar-Vic	¾	4⅝	2¾	1 9/16	Bonner	$3.25
Gar-Vic	⅝ 1/3 (Bracket)	4⅝	2¾	1 9/16	Pittman 704A	2.75
Gar-Vic	⅞	4⅝	3⅛	1 9/16	Pittman DC 195, DC 62B, etc. Bracket 704A Bracket	 .98 .75
Echo	1⅛	3½	3½	1	Bonner	1.98
Echo	1 1/16	2⅞	2⅞	1½	Pittman 704A	1.98
Echo	1⅛	3½	3½	1½	Pittman 704A	1.98
Echo	1 1/16	3	3	1	Bonner	1.98
Auto Hobbies	½	4⅛	2¾	15/16	Bonner or Mabuchi	1.98
Auto Hobbies	9/15	4⅛	2¾	15/16	Bonner - Mabuchi Pittman's DC 105, DC 62B, DC 70, DC 60 - Varney DC 704A Brackets only	2.39 .99
Pitstop	1⅞	3⅝	3⅝	1½	Pittman DC 70, DC 85A	2.98



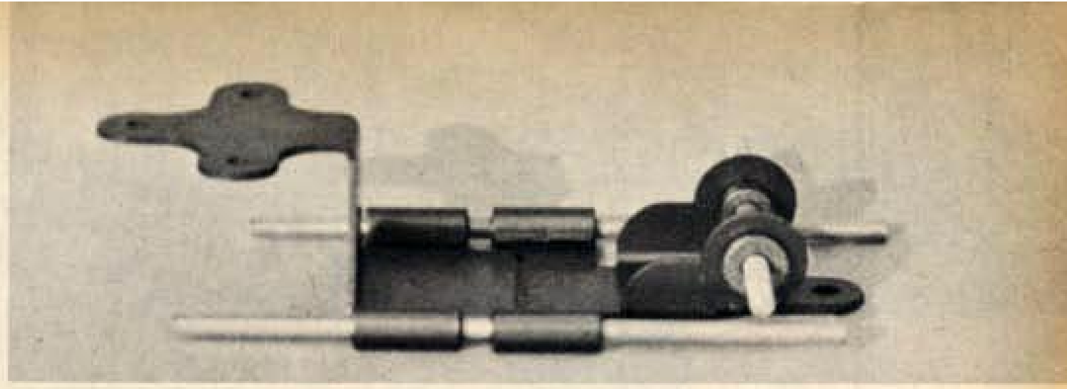
Auto Hobbies chassis in assembled and disassembled stages. It has only one frame but carries both 1/32 and 1/24 scale listings. Frames are made from .025 brass; are very adaptable.

No longer is it necessary to fabricate your own chassis for a home-built car. There is a wide variety of units currently available that should take care of most needs, and end what has been a tedious task. Here is general information on the most popular, with specific measurements in the box listings.

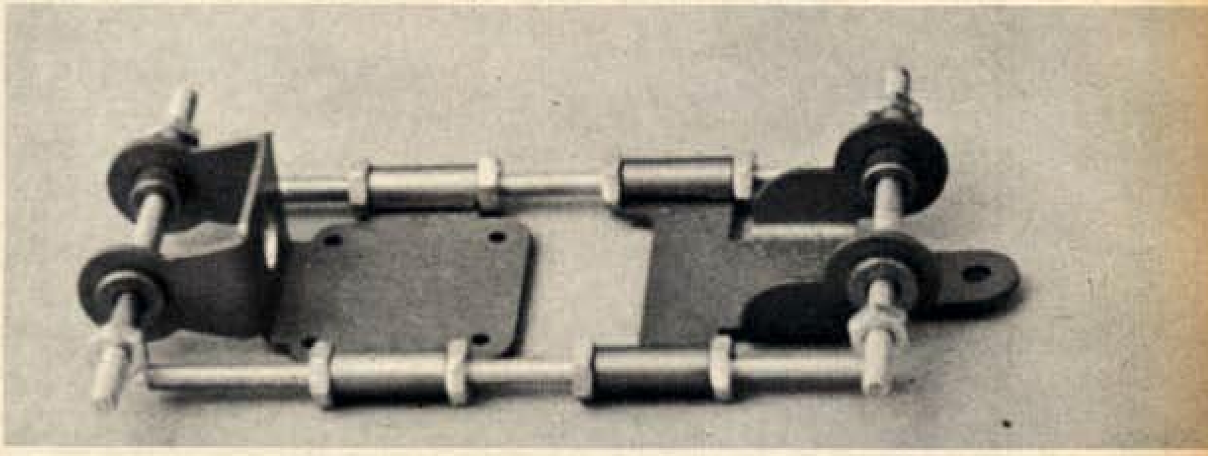
GAR-VIC: These two-piece .040-inch aluminum frames are anodized in blue and maroon. In all cases the front section of the frame is the same. For the rear section there is one to handle Bonner and one for Pittman DC-704A. For those using the Bonner combination, an attaching bracket is available to carry the long slim-type Pittmans (DC-62B, etc.). Frames are listed for 1/32 and 1/24 scale. The only difference in these is in the length of the axles that come with the frames. In all cases, frame, axles, retainers, axle bushings and motor screws are included. The front wheels support the frame and body.

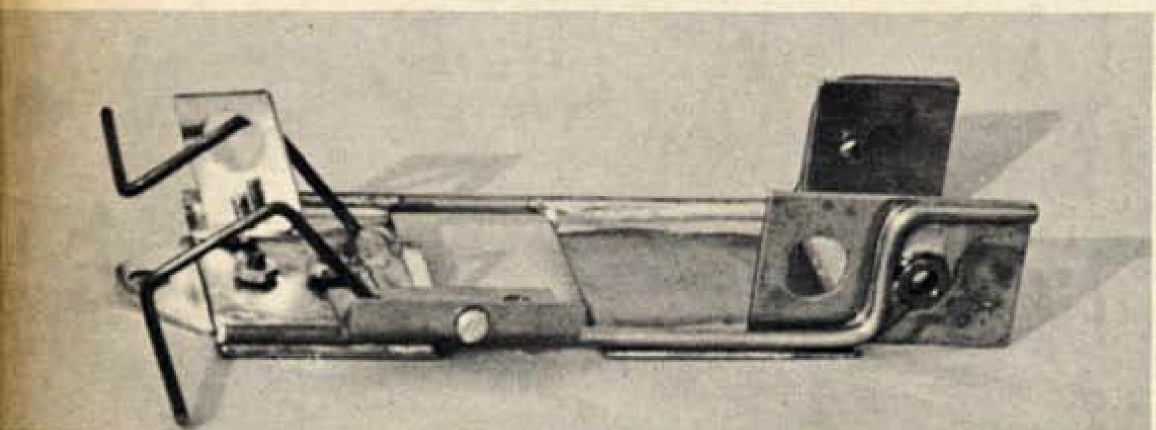
ECHO: Made from .040 brass, there are various frames to carry the leading motors in the field. Front axle unit and mounting screws are supplied. The front axles are two independent swing-up units that touch and roll but do not





Gar-Vic two-piece frames are of aluminum. Bracket above is adaptor for Pittman DC 195. Unit at right above is for the Pittman 704A. Chassis at right is for Bonner engine.



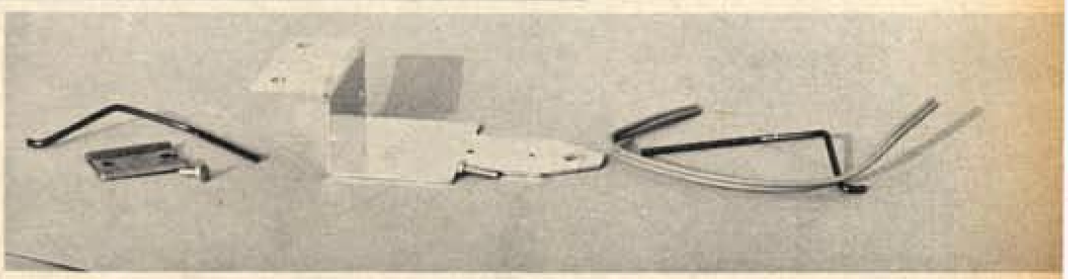


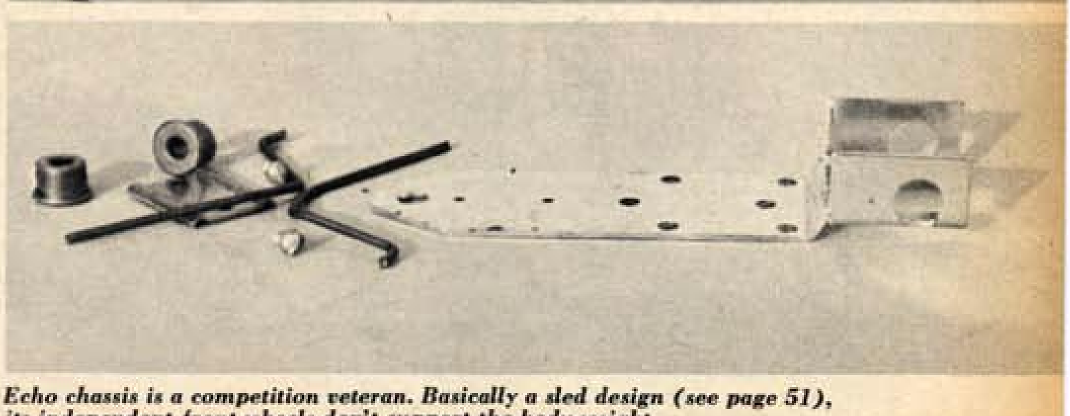
Pit Stop is one of the newest brands on the market. It is meant to take the Pittman DC 70 and DC 85A motors.

support the weight of the chassis and body. There are listings in both 1/32 and 1/24 scale.

AUTO HOBBIES: Offered are two-piece frames from .025 brass, with a sliding front axle and guide unit. The main base will carry either a Bonner or the Mabuchi motors of the type used by Strombecker prior to April 1963. The same frame with two additional brackets will accept the slim-type Pittmans, Varney and others of similar design. They come with axle and guide bushings, retainers, motor screws and locking screws. Although there is only one frame, it carries both 1/32 and 1/24 scale listings. The front wheels support the frame and body or can float through adjustable guide bushings.

There are many other frames on the market but currently the above three are the only ones to be found nationally. Others in spotted areas include Micro, Mini, Pit Stop, and Kendall, while the Revell frame will soon be available nationwide.

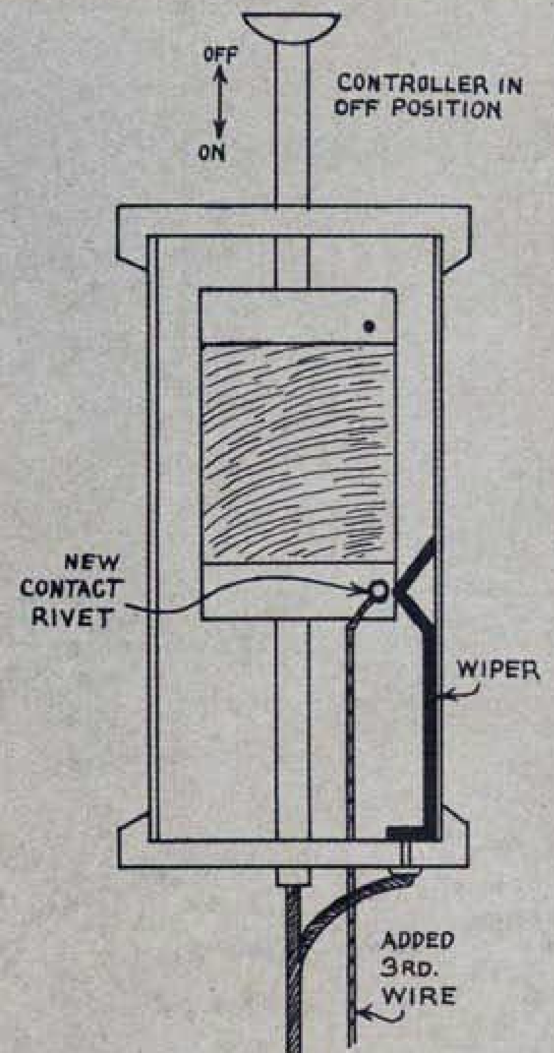




Echo chassis is a competition veteran. Basically a sled design (see page 51), its independent front wheels don't support the body weight.

Slot Racer's Work Shop

NEW IDEAS IN RACING MODIFICATIONS



BRAKES

Here is a system that permits brakes to be built in a controller. It eliminates use of a short-out button with the result of either brakes or power, but never both. First, open up the controller and see where the wiper is positioned when the controller is in the off position. On the opposite (coil) side, fasten a piece of metal (a brass rivet is good) so that it is in direct contact with the wiper. At the same time, make sure that it doesn't touch the coil. To the next part, attach a wire as long as the other two on the control. It will be necessary to run another wire from one of the lane contact strips. To determine from which side to take the wire, hook the controller to the track in the normal manner. Now, without pushing down the control, touch the new wire first to one contact strip and then the other. If on one the car runs, and on the other there is just a spark, trade positions with the two normal control wires. If there is no short, or the car does not run while touching either contact, then run the new track wire from the side opposite the one to which the wiper runs. If it does short and run, then run the new wire from the side that was shorting after the two control leads have been reversed.

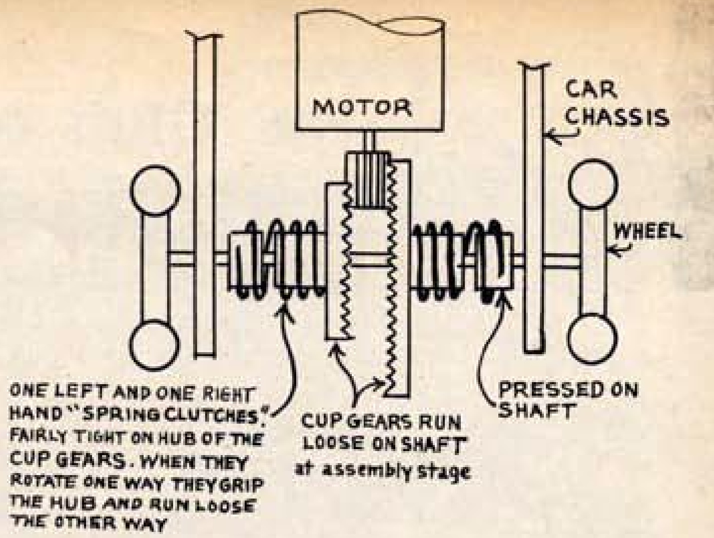


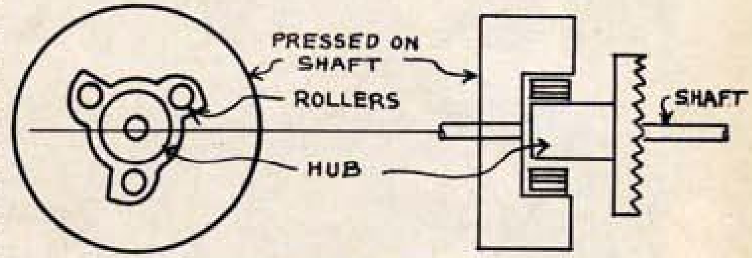
HAY BALES

Styrofoam cut into scale-size rectangles makes excellent hay bales for a miniature race course. They become very realistic when mist-sprayed with Pactra spray bombs Lemon Yellow S-8 and Wood Tan S-17. For a finished touch, use old coil wire to wrap each bale, exactly simulating baling wire. It adds up to an inexpensive way to create one more authentic touch in a first class slot racing layout.

TWO-SPEED TRANSMISSION

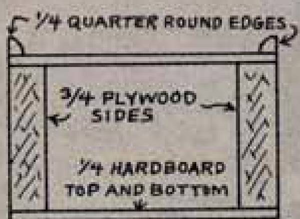
An extra gear ratio solves the problem of added control on curves. Here is how to do it. Mount two uni-directional clutches on the rear axle, either roller sprag or spring clutch type. One clutch is for left-hand rotation, the other for right-hand. Attach a small crown gear to one clutch, a larger gear to the other. Both gears ride on the same motor output gear. Thus, if the motor runs clockwise, one gear is driven, the other free-wheels. When the motor direction is reversed, the other gear takes over. How to reverse motor rotation? There are three methods. Mount a tiny D.P.D.T. switch on the car if no outside control is available. The switch controls motor polarity and makes either gear ratio available. The ideal way is to remotely control the gear change. Run wires from the power supply to a hand-held D.P.D.T. switch and control current to the car in the normal manner. To shift gears, reverse the polarity of the power supply. Some tracks have a polarity switch, but for a track where wiring cannot be altered, use a GT body and mount a train-type ratchet relay in it to reverse polarity each time power is interrupted. Necessary is a stop on the hand control to prevent it from returning to complete off, and a separate switch in series with it to shut off the current.

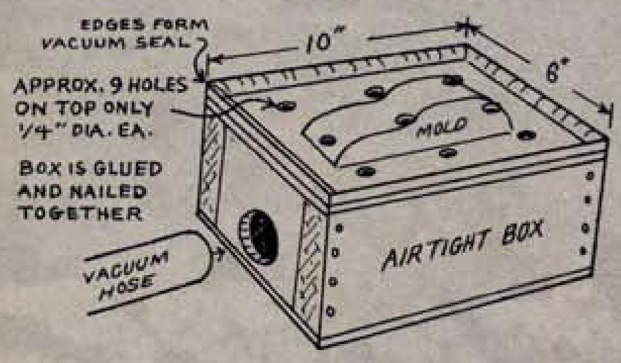




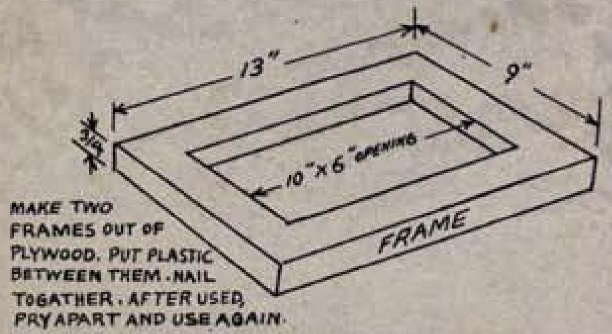
ALTERNATE CLUTCH SOLUTION

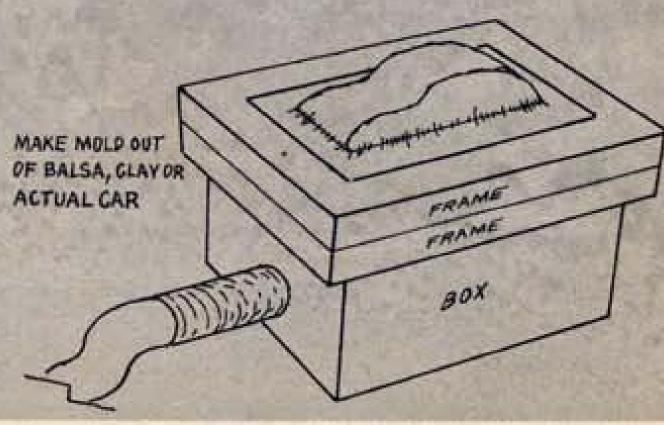
YOUR OWN VACUUM-FORMED BODIES





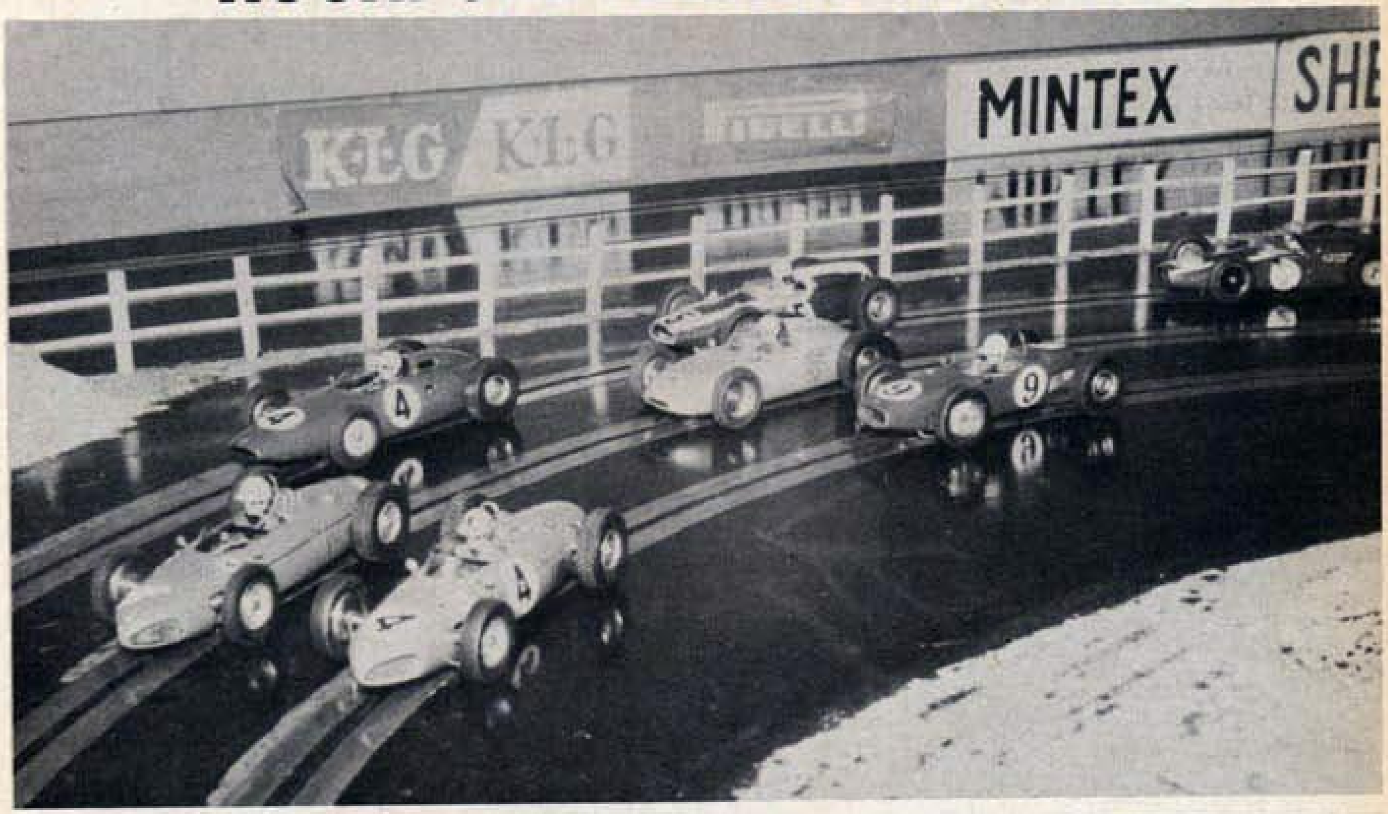
Building vacuum-formed plastic bodies is easier than it sounds. Required is a simple frame to hold the plastic while it is being heated in the kitchen oven, and the vacuum box that contains the mold. The tube from a tank-type vacuum cleaner supplies the necessary vacuum. The soft heated plastic is pulled into the mold via the vacuum cleaner's power, and the result is a completed body shell. It is an inexpensive way to build a variety of body shells or a number of duplicates of the same shell for friends.





MCS *Spotlights:* **Club of the Month**

ROCKFORD SCALE RACEWAYS



One of the oldest known active clubs in slot racing, the Rockford Scale Raceway of Rockford, Illinois bases some of its happy growth on active participation by all of its members. Rather than have one central track and meeting place, the group divides its activities between three great courses (all illustrated on this page) located at the homes of various members. Secretary Jim Klipping reports that the club has had great success with nation-wide mail-in events, matching cars from many states and foreign countries.







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